VILLAGE OF PALATINE

VILLAGE HALL - COUNCIL CHAMBERS 200 E. WOOD STREET
PALATINE, IL 60067-5339 – (847) 359-9050
http://www.palatine.il.us

PLAN COMMISSION

AGENDA ● MARCH 16, 2021

Village Hall - Council Chambers | **Regular Meeting** | **7:00 PM**

I. CALL TO ORDER

II. APPROVAL OF MINUTES

The minutes from the March 2, 2021 meeting will be reviewed at the next Plan Commission meeting.

III. PUBLIC HEARING

1. Preliminary and Final Plat of Subdivision; Vacation of Sellstrom Drive, east of the Subject Property, (approximately 500 feet); Final Planned Development; Rezoning from Manufacturing to Planned Development, for the property located at 200 E. Daniels Road, 300 E. Daniels Road, 350 E. Daniels Road, 200 S. Hicks Road, and 1 S. Sellstrom Drive (former Weber Stephen's location)

IV. COMMUNICATIONS

V. ADJOURNMENT

VILLAGE OF PALATINE

VILLAGE OF PALATINE
Plan Commission

SCHEDULED 03/16/21 07:00 PM

CASE STAFF STATEMENT (ID # 6632)

Preliminary and Final Plat of Subdivision; Vacation of Sellstrom Drive, east of the Subject Property, (approximately 500 feet); Final Planned Development; Rezoning from Manufacturing to Planned Development, for the property located at 200 E. Daniels Road, 300 E. Daniels Road, 350 E. Daniels Road, 200 S. Hicks Road, and 1 S. Sellstrom Drive (former Weber Stephen's location)

CASE NUMBER: 21-21

PETITIONER: Midwest Industrial Funds (Mr. Pat Schaner)

LOCATION: 200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, and 1 S. Sellstrom Drive (former Weber Stephen Products plant and distribution location)

PROPOSAL: Preliminary and Final Plat of Subdivision, Vacation of Sellstrom (east of the Subject Property - approximately 500 feet), Final Planned Development, and Rezoning from Manufacturing to Planned Development.

ZONING AND LAND USE: Manufacturing District, vacant buildings (former Weber Stephen manufacturing plant, truck loading docks, offices, and associated parking lots)

SURROUNDING CONDITIONS:

North:	Union Pacific railroad right-of-way;
South:	Manufacturing district properties - various along E. Helen Road
East:	Manufacturing district properties (Fels Tool/AMAZON and Manufacturing properties, S. Hicks Road, and the Union Pacific railroad right-of-way)
West:	R-2 Single-Family residential properties along S. Oak Street

COMPREHENSIVE PLAN: Industrial/Manufacturing uses

BACKGROUND:

- The Subject Property (approximately 25-acres) is zoned Manufacturing and previously served as the manufacturing and distribution location for Weber Stephen Products.
- Midwest Industrial Funds proposes to redevelop the site into two industrial buildings and lots. The buildings will be constructed on a speculative basis, but MIF is marketing the property toward distribution/warehouse uses, light assembly, manufacturing, and corporate headquarter uses.
- The developer intends to subdivide the property and construct two new industrial buildings, with associated parking lots and interior truck docks between the buildings.
- The Village Council reviewed and approved the Preliminary Planned Development, subject to conditions, at the Village Council meeting on December 14, 2020 through Ordinance #O-103-20.
- The Petitioners have applied for Preliminary and Final Plat of Subdivision, Vacation of Sellstrom Drive (east of the Subject Property and approximately 500 feet), Final Planned Development, and Rezoning from Manufacturing to Planned Development.
- The Village Engineer has reviewed and conditionally approved the Final Engineering Plans and Final Storm Water Management Report, subject to several conditions.

ANALYSIS:

- The Final Site Plan and bulk standard requirements (maximum height, setbacks) remain consistent with the Preliminary Planned Development approval and the following table summarizes the proposed site plan:

	Proposed
Building square footage and FAR **(proposed)**:	**275,388 (west) -** 14.42-acres; 43.8% (70% is maximum) **153,043 (east) -** 10.96-acres; **32.07%**

Number of buildings:	**2**
Number of truck docks:	**32 (+ 10 future) - west 28 - east = 70**
Building height: ******The proposed building heights comply with the maximum allowed in the M district (4-stories; 60 feet) & maximum abutting SFR (3-stories; 45 feet) - also cannot exceed 1/3 setback to residential property	**Western building - 37 feet 3 inches (majority of bldg.) and 40 feet 3 inches - office parapet Eastern building - 37 feet to 45 feet 4 inches - office parapet**
Western building setback (west) to Oak Street properties:	**122 feet (including a 50-foot buffer yard, with berm)**
Eastern building setback (north) to railroad ROW	**66 feet 3 inches**
Total building square footage	**428,431 square feet**

Architectural and Landscaping Plans:

- The Final Architectural Plans and renderings are also consistent with the Preliminary Planned Development approval and the elevation materials continue to represent glass and stained precast concrete. As planned, the buildings could accommodate 1-4 tenants. On the west side of the western building (directly adjacent to the residential properties along S. Oak Street), the only planned access points are man doors. The required emergency only access to Oak Street will be gated an only be accessed in the instance of an emergency, by the appropriate authorities.

- The Final Landscaping Plans were amended to include both some additional plantings and extend the 8-foot fencing along the northern property line to provide additional screening for the residential properties north of the Union Pacific railroad right-of-way. The Preliminary Planned Development approved the narrowing of the 50-foot buffer requirement on the north side of the property, subject to adding additional plantings around Detention Area “B” and extending the 8-foot fencing in this area. The revised plans reflect the Preliminary Planned Development approval and the additional 8-foot fencing.

- The required 50-foot buffer on the west side of the property and the associated berm remain consistent with the Preliminary Planned Development plans. The type and quantify of landscaping along the west property line also remain consistent with the Preliminary Planned Development approval.

Engineering:

- The Final Site Improvements Engineering Plans are consistent with the Preliminary Planned Development approval. The Village Engineer has reviewed and conditionally approved the plans, subject to the required revisions. The Engineering Plans increase the capacity of the detention basin in the northwest corner of the site (Detention Basin "A") and lower it by approximately 6 feet. Stormwater will be directed north to Basin A and then conveyed east along the northern property line, ultimately discharging south from the site and east to Salt Creek through a 60-inch storm sewer.

- Basin A will also accept stormwater from S. Oak Street and assist with flooding issues in the area. Finally, an existing stone box culvert in the railroad ROW, will be maintained and reconnected to Basin A. This will assist with stormwater constraints upstream and to the north of the railroad right-of-way.

- South of Daniels Road, the grade and swale will be refined and re-stablished to convey stormwater east to Detention Basin C, ultimately to discharge from the site and reach Salt Creek. Detention Basin B, between the truck docks captures stormwater coming from the building and docks through 12-inch storm sewers and conveys the water through an underdrain, north to the culvert on the north side of the property and exiting the site to Salt Creek.

- The proposed stormwater management plans improve the flooding issues in the area and renew the previously existing grades to convey stormwater to Salt Creek and will not only address existing stormwater issues on the subject property, but also will also further mitigate and improve off-site flooding and upstream issues in the area.

RECOMMENDATIONS:

The Final Planned Development submission is consistent with the Preliminary Planned Development approval. The stormwater management improvements will benefit the Subject and surrounding properties in the area. The proposed uses, linked to the

Manufacturing District uses list and requirements, are consistent with the existing zoning classification and future land use recommendations of the Comprehensive Plan. Therefore, Staff recommends of approval, subject to the following conditions:

1. **The development shall substantially conform to the Final Site Improvement Plans prepared by Spaceco Engineering Inc., dated 09/03/2020, last revised 01/22/21, the Cross Section Exhibit prepared by Spaceco Engineering Inc., dated 10/13/20, the Architectural Site Plan prepared by Harris Architects, Inc. dated 07/07/2020, last revised 10/23/2020, Preliminary Architectural Elevations prepared by Harris Architects, Inc., dated 07/07/2020, last revised on 08/31/2020, the Preliminary Conceptual Architectural Rendering Elevation prepared by Harris Architects, Inc., KLOA Traffic Impact Study (dated June 30,2020), KLOA Helen Road Traffic Evaluation (dated November 30, 2020), revised project narratives, and the Landscaping Plans prepared by IRG Group, Inc., dated 07/08/2020, last revised on 02/05/21 except as such plans may be revised to conform to Village Codes and Ordinances.**

2. **The traffic calming design shall include extending the curb to narrow E. Helen Road down to a ten foot lane width in the East and West directions at the intersection (Benton or Oak Streets, as confirmed by the Village), and shall comply with current standards for traffic calming practices involving lane narrowing. The installation of an All-way stop sign at the intersection shall also be a requirement.**

3. **The Final Engineering Plans and stormwater report, including the televising of the storm sewer, shall be revised in a manner acceptable to the Village Engineer. The culvert under the Union Pacific railroad right-of-way shall also be cleaned and inspected (CCTV).**

4. **The initially submitted Engineer's Estimate of Probable Cost shall be revised in a manner acceptable to the Village Engineer.**

5. **Uses and all performance standards shall be governed by the Manufacturing district use lists in the Palatine Zoning Ordinance and Village Code. Sign plans shall follow the Manufacturing district sign regulations and the Village Sign Code for each building and based upon the frontage along Sellstrom Drive and acreage of each lot.**

6. **The Final Plan Review fees in the amount of 1.5% of total project improvement costs shall be submitted in a manner acceptable to the Village Engineer.**

7. **As a condition of the Final Planned Development, a Final Planned Development letter of credit in an amount acceptable to the Village Council shall be submitted in a manner acceptable to the Director of Planning and Zoning.**

8. **A Public Improvement Letter of Credit shall be submitted to insure the completion of all public improvements, as defined within the Village Code, for an amount of 115% of the approved EEOC, along with a cash bond of 10% for the required one-year maintenance period.**

9. **The final landscape plan and screening plans shall be revised in a manner acceptable to the Director of Planning and Zoning and shall include additional landscaping around Detention Basin B to further screen the truck activities in the eastern building.**

10. **The final photometric and lighting plan shall be revised in a manner acceptable to the Village Engineer. Light shields shall be required for all lights proximate to residential properties, at the determination of the Village Engineer. The revisions should include the following:**

    The photometric shall be resubmitted showing the light levels at the property lines are in accordance with Village code below:

    a. **APPENDIX A 7.04(b) *[Lighting.]* All open off-street parking areas shall be illuminated and lighting shall be arranged so as to provide glareless illumination and to reflect the light away from adjoining properties, according to the standards as stated in the Building Code.**
    b. **6-8.1(3) *Illumination.* All open off-street parking areas covered under this article shall be illuminated and such illumination shall be so shielded or otherwise optically controlled so as to provide glareless illumination in such manner as not to create a nuisance on adjacent properties or roadways. (Ord. No. 0-30-10, §1, 4/5/10)**
        1. **Illumination of parking areas shall limit light spillage onto adjacent property to a maximum horizontal footcandle value at the perimeter of the property that is being illuminated in accordance to the following:**

Adjacent Property Use	Maximum Footcandles at Perimeter
Single-family residential....	0.1
Multiple-family residential....	0.2
Business....	2.0
Industrial....	5.0

Park, school and institutional.... 5.0

11. The Petitioners shall submit a Subdivision Improvement Agreement in a manner acceptable to the Village Attorney.

12. MWRD/WMO, IEPA, and CCDD report, NCS& W permits shall be submitted in a manner acceptable to the Village Engineer. Wetlands - A USACoE permit shall be required pursuant to the jurisdiction determination letter LRC-2020-00573 dated July 31, 2020. A WMO permit shall also be required prior to any excavation in the determined wetland areas.

13. The final traffic directional signage and wayfinding sign plan within the site plan shall be submitted in a manner acceptable to the Village Engineer.

14. The Plat of Subdivision shall be revised in a manner acceptable to the Village Engineer and Director of Planning and Zoning.

15. Cross access easements, declarations and a Reciprocal Easement Agreement for the entire property governing the maintenance of access points, stormwater areas and any other common areas shall be submitted in a manner acceptable to the Village Attorney and Village Engineer as part of the Final Planned Development application process.

16. A Plat of Vacation for the portion of Sellstrom Drive adjoined with the Subject Property shall be submitted in a manner acceptable to the Village Engineer. If required, a Plat of Easement Vacation shall be submitted in a manner acceptable to the Village Engineer and Village Attorney, as part of the Final Planned Development application process.

17. The monotony code shall apply to all building elevations:
Sec. 6-42.1 Exterior Building Design: When rear and side elevations are visible from public streets or neighboring properties, exterior building design and detail on all elevations shall be coordinated with regard to color, types of materials, number of materials, architectural form, and detailing to achieve harmony and continuity of design.

18. The final dumpster locations and required screening materials shall be submitted in compliance with Village Code, pursuant to Sec. 6-42.2 Screening: (a) Trash containers and outdoor storage areas shall be screened from public streets, pedestrian areas, and neighboring properties. The screens should be designed to be compatible with the

architectural character of the development. Trash screens shall also meet the requirements of Chapter 12 of this code. These screens shall be constructed of durable materials similar to those of the building and shall have solid (opaque) walls and doors, as part of the Final Planned Development application process. The final locations could also require the submission of a revised auto-turn, in a manner acceptable to the Director of Fire Prevention.

19. **All rooftop equipment shall be screened in compliance with Code:**
(b) Roof-top equipment screening: 1. New Construction. All mechanical equipment and other similar devices located on any roof shall be visually and acoustically screened on all sides. Design and detail of such screening on all elevations shall be coordinated with regard to color, types of materials, number of materials, architectural form, and detailing to achieve harmony and continuity of design with the major portions of the building.

20. **Pursuant to the revised project narrative, the Petitioner shall submit the proposed business and operations' plans (identified tenants) for Staff review for compliance with the manufacturing use list and standards.**

ATTACHMENTS:

- Preliminary Planned Development approval
- Project Narrative Revised 02.05.2021
- Final Engineering Plans
- Final Stormwater Report
- Existing Storm Sewer design
- Final Plat of Subdivision
- Revised Site Plan_Palatine_10.23.20
- Palatine Corporate Center Building Elevations_8.31.2020
- Concept Rendering_Corner_06-15-2020
- Dock Seal Exhibit
- Traffic Impact Addendum - 19-087 Helen Road Evaluation in Palatine 11-30-2020
- Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw
- Final Landscape Plans
- Tree Survey Rating Schedule
- Existing Tree Location Plan
- Wetland ACOE JD-Approved 2020-07-31
- Wetland Delineation Report_20265
- Wetland Map

- Cross Section
- Preliminary Photometric plan
- Site Lighting Fixture Submittal_09.25.2020
- MIF Site Noise Narrative
- 2007 Aerial (noise narrative exhibit)
- 2010 Aerial (noise narrative exhibit)
- ALTA Survey
- MIF - Final Planned Development application
- Public Notice

ORDINANCE NO. O-103-20

AN ORDINANCE GRANTING
PREMLIMINARY PLANNED DEVELOPMENT APPROVAL FOR
200 E. DANIELS ROAD, 300 E. DANIELS ROAD, 350 E. DANIELS ROAD, 200 S. HICKS ROAD, AND I S. SELLSTROM DRIVE

WHEREAS, upon petition of owners of said property, a Public Hearing was held by the Plan Commission of the Village of Palatine on December 8, 2020 and in accordance with the Zoning Ordinance of the Village of Palatine, in such case made and provided, and said Plan Commission, having made its findings in a report to the Mayor and Village Council of the Village of Palatine regarding a request for a Preliminary Planned Development to permit a 2-lot warehouse/office buildings development :

SEE ATTACHMENT – LEGAL DESCRIPTION:

PIN #: 02-23-114-010, 02-23-114-021, 02-23-114-022, 02-23-114-034, 02-23-114-035, 02-23-114-036, 02-23-114-037, 02-23-114-038, and 02-23-114-039

NOW, THEREFORE, BE IT ORDAINED, by the Mayor and Village Council of the Village of Palatine, Cook County, Illinois, acting in the exercise of their home rule power:

SECTION 1: That Preliminary Planned Development to permit a 2-lot warehouse/office buildings is hereby granted, subject to the following conditions:

1. The development shall substantially conform to the Preliminary Site Improvement Plans prepared by Spaceco Engineering Inc., dated 09/03/2020, last revised 10/22/2020, the Cross Section Exhibit prepared by Spaceco Engineering Inc., dated 10/13/20, the Architectural Site Plan prepared by Harris Architects, Inc. dated 07/07/2020, last revised 10/23/2020, Preliminary Architectural Elevations prepared by Harris Architects, Inc., dated 07/07/2020, last revised on 08/31/2020, the Preliminary Conceptual Architectural Rendering Elevation prepared by Harris Architects, Inc., KLOA Traffic Impact Study (dated June 30,2020), KLOA Helen Road Traffic Evaluation (dated November 30, 2020), revised project narrative and supplemental Plan Commission response information submitted by the Petitioner, and the Preliminary Landscaping Plans prepared by IRG Group, Inc., dated 07/08/2020, last revised on 12/01/20 except as such plans may be revised to conform to Village Codes and Ordinances.

Attachment: Preliminary Planned Development approval (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

Attachment: Preliminary Planned Development approval (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

ORDINANCE NO. O-103-20

AN ORDINANCE GRANTING A PRELIMINARY PLANNED DEVELOPMENT APPROVAL FOR 200 E. DANIELS ROAD, 300 E. DANIELS ROAD, 350 E. DANIELS ROAD, 200 S. HICKS ROAD AND 1 S. SELLSTROM DRIVE

Published in pamphlet form by authority of the
Mayor and Village Council of the Village of Palatine
on December 14, 2020

Attachment: Preliminary Planned Development approval (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

2. The Final Engineering Plans and stormwater report, including the televising of the storm sewer, shall be revised in a manner acceptable to the Village Engineer. The revisions shall also include a traffic calming engineering design along E. Helen Road at Oak or Benton Streets and submitted for Village review and consideration.

3. An Engineer's Estimate of Probable Cost shall be submitted in a manner acceptable to the Village Engineer.

4. Uses and all performance standards shall be governed by the Manufacturing district use lists in the Palatine Zoning Ordinance and Village Code. Sign plans shall follow the Manufacturing district sign regulations.

5. Review fees in the amount of 1.5% of total project improvement costs shall be submitted in a manner acceptable to the Village Engineer.

6. As a component of the Final Planned Development, a Planned Development letter of credit in an amount acceptable to the Village Council shall be submitted in a manner acceptable to the Director of Planning and Zoning.

7. A Public Improvement Letter of Credit shall be submitted to insure the completion of all public improvements, as defined within the Village Code, for an amount of 115% of the approved EEOC, along with a cash bond of 10% for the required one-year maintenance period.

8. The final landscape plan and screening plans shall be revised in a manner acceptable to the Director of Planning and Zoning and shall include additional landscaping around Detention Basin B to further screen the truck activities in the eastern building.

9. The final fencing/screening plan along the northern property line (proximate to the truck docks in the middle of the site and eastern parking lot) shall be revised in an manner acceptable to the Director of Planning and Zoning, to reduce any noise impact from trucks driving north between the buildings and headlight sweeps along the eastern parking lot. The would include the extension of the 8-foot approximately 130 feet east, for the fencing on the north side of the property.

10. The final photometric and lighting plan shall be revised in a manner acceptable to the Village Engineer. Light shields shall be required for all lights proximate to residential properties, at the determination of the Village Engineer.

Attachment: Preliminary Planned Development approval (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

11. The Petitioners shall submit a Subdivision Improvement Agreement in a manner acceptable to the Village Attorney.

12. MWRD/WMO, IEPA, and CCDD report, NCS& W permit shall be submitted in a manner acceptable to the Village Engineer.

13. The final traffic directional signage plan shall be submitted in a manner acceptable to the Village Engineer.

14. The Plat of Subdivision shall be revised in a manner acceptable to the Village Engineer and Director of Planning and Zoning. All utilities shall be owned and maintained by the property owner. This shall be noted on the plat, along with the statement that the Village shall have the right, but not the obligation, to enter the site to repair a utility and change the property owner for the repair costs.

15. Cross access easements, declarations and a Reciprocal Easement Agreement for the entire property governing the maintenance of access points, stormwater areas and any other common areas shall be submitted in a manner acceptable to the Village Attorney and Village Engineer as part of the Final Planned Development application process.

16. A Plat of Vacation for the portion of Sellstrom Drive adjoined with the Subject Property shall be submitted in a manner acceptable to the Village Engineer. If required, a Plat of Easement Vacation shall be submitted in a manner acceptable to the Village Engineer and Village Attorney, as part of the Final Planned Development application process.

17. The monotony code shall apply to all building elevations:
Sec. 6-42.1 Exterior Building Design: When rear and side elevations are visible from public streets or neighboring properties, exterior building design and detail on all elevations shall be coordinated with regard to color, types of materials, number of materials, architectural form, and detailing to achieve harmony and continuity of design.

18. The final dumpster locations and required screening materials shall be submitted in compliance with Village Code, pursuant to Sec. 6-42.2 Screening: (a)

    - Trash containers and outdoor storage areas shall be screened from public streets, pedestrian areas, and neighboring properties. The screens should be designed to be compatible with the architectural character of the development. Trash screens shall also meet the requirements of Chapter 12 of this code. These screens shall be

constructed of durable materials similar to those of the building and shall have solid (opaque) walls and doors, as part of the Final Planned Development application process. The final locations could also require the submission of a revised auto-turn, in a manner acceptable to the Director of Fire Prevention.

19. All rooftop equipment shall be screened in compliance with Code:
(b) Roof-top equipment screening: 1. New Construction. All mechanical equipment and other similar devices located on any roof shall be visually and acoustically screened on all sides. Design and detail of such screening on all elevations shall be coordinated with regard to color, types of materials, number of materials, architectural form, and detailing to achieve harmony and continuity of design with the major portions of the building.

20. As part of the Final Planned Development and pursuant to the revised project narrative, the Petitioner shall submit the proposed business and operations' plans (identified tenants) for Staff review for compliance with the manufacturing use list and standards.

SECTION 2: That the petition for preliminary and final planned development, a copy of the public notice, be attached hereto and form a part of this ordinance.

SECTION 3: This ordinance shall be in full force and effect upon passage and approval as provided by law.

PASSED: This 14 day of December, 2020

AYES: 6 NAYS: 0 ABSENT: 0 PASS: 0

APPROVED by me this 14 day of December, 2020

Mayor of the Village of Palatine

ATTESTED and FILED in the office of the Village Clerk

this 14 day of December, 2020

Village Clerk

Attachment: Preliminary Planned Development approval (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

Attachment: Preliminary Planned Development approval (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

EXHIBIT A

DESCRIPTION OF LAND

PARCEL 1:

LOTS 1 AND 2 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

EXCEPTING THEREFROM THAT PART OF LOT 1 DESCRIBED AS FOLLOWS:

COMMENCING ON THE WEST LINE THEREOF AND 407.0 FEET NORTH OF THE SOUTH WEST CORNER THEREOF; THENCE EAST AND PARALLEL TO THE SOUTH LINE THEREOF, 10.0 FEET FOR A PLACE OF BEGINNING; THENCE CONTINUING EAST PARALLEL TO THE SOUTH LINE OF SAID LOT 1, 200.08 FEET TO A POINT; THENCE NORTH AND PARALLEL TO THE WEST LINE THEREOF, 99.67 FEET TO A POINT OF CURVE; THENCE NORTHWESTERLY ON A CURVE CONVEX TO THE NORTH EAST HAVING A RADIUS OF 399.27 FEET AN ARC DISTANCE OF 122.23 FEET TO A POINT THAT IS 627.0 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE WEST AND PARALLEL TO THE SOUTH LINE THEREOF, 181.52 FEET TO A POINT THAT IS 10.0 FEET EAST OF THE WEST LINE THEREOF; THENCE SOUTH AND PARALLEL TO SAID WEST LINE, 220.0 FEET TO THE POINT OF BEGINNING, ALL IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

ALSO EXCEPTING THAT PART DESCRIBED AS FOLLOWS:

THAT PART OF THE EAST 316 FEET OF LOT 1 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT (HEREINAFTER REFERRED TO AS "INDUSTRIAL DISTRICT"), BEING A SUBDIVISION OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING NORTH OF A LINE 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1;

ALSO EXCEPTING THAT PART OF SAID LOT 1 DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN SAID LOT 1 WHICH IS 316 FEET WEST OF THE EAST LINE OF SAID LOT 1 AND 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1 AS A PLACE OF BEGINNING; THENCE NORTH A DISTANCE OF 220 FEET; THENCE WEST A DISTANCE OF 84 FEET; THENCE SOUTH A DISTANCE OF 220 FEET; THENCE EAST A DISTANCE OF 84 FEET TO THE PLACE OF BEGINNING;

ALSO EXCEPTING THAT PART DESCRIBED AS FOLLOWS:

MIDWEST
INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

Attachment: Project Narrative Revised 02.05.2021 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

February 4, 2021

Ben Vyverberg – Director of Planning and Zoning
Village of Palatine

Re: Palatine Corporate Center (Former Weber-Stephens Property)
Project Narrative

Ben:

Midwest Industrial Funds ("MIF") is excited to be presenting the redevelopment of the former Weber Stephens site located at Sellstrom and Daniels per the proposed Plat of Subdivision, to the Village of Palatine for preliminary plan approval. The total site as depicted on the proposed Plat of Subdivision consists of 25.3 acres.

The plan is to demolish the three existing, obsolete industrial buildings on site and construct new modern industrial buildings that are in demand in the market. The overall site will consist of two industrial lots. The overall property will be governed by a Reciprocal Easement Agreement (REA) document that will be forthcoming. Among other things the proposed REA document will set forth the easements for shared services (access roads, storm detention, signage etc.) for the benefit of each proposed lot as depicted on the submitted materials. The preliminary stormwater design has been provided showing three detention areas, a northwest pond, a center truck court area and an eastern detention area will be constructed to accommodate the stormwater needs of both proposed lots. The new stormwater design is a much better design than what currently exists on the site. First, given new/updated stormwater standards, the design will store significantly more stormwater and provide better means of conveyance than what currently occurs. Second, our stormwater design directs water away from the residential areas. Therefore, correcting many of the problems currently experienced by residents to the west along Oak Street and also residents to the north of the railroad tracks.

Two industrial buildings will be developed on a speculative basis by MIF per the proposed site plan included with the submittal. The two buildings total approximately 428,000 square feet and are each designed with maximum flexibility to accommodate one to four tenants, ranging in size from 40,000 square feet to 275,000 square feet. The buildings will be high image and feature exterior materials including precast concrete panels and glass office entrances. In addition, each building has ample car parking, three office entrances and truck loading. Special care has been taken during the design phase to ensure that all truck operations occur between the buildings away from the residential areas so noise will not be an issue. In addition, additional design features including berms, additional landscaping and fencing, have been provided as part of the design to help with screening of onsite car and truck lights, noise and sights for the residential areas to the west and north of proposed development. The loading docks on new industrial buildings are designed to be a substantially enclosed system. All loading and un-loading of trucks happen from the interior of the building. The exterior of the loading dock will have a dock seal secured to the exterior of the building (please see the included exhibit). The dock seal is a three sided, heavy duty cushion designed to closely fit around the exterior of the trailer as its positioned at a dock position. The dock seal will provide a level of weather protection for the operation of loading/un-loading trucks but also contain noise.

The new development will be marketed to a wide range of potential users including, but not limited to distribution, manufacturing, light assembly and corporate headquarters. The project will have a positive impact on the Palatine Community by bringing in many quality jobs that have been lost over a number of years due to the obsoletion of the existing buildings. The ability to provide state of the art buildings will positively affect the tax base of the property over time without negatively impacting community services (school system, utility services, etc). The project is well located for transportation both private and public transportation options, including close proximity to two Metra stations and bus routes. In addition, the project's location to the

Attachment: Project Narrative Revised 02.05.2021 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

downtown Palatine area, including many food and entertainment options will be a definite plus for employers looking to locate in the area.

Midwest Industrial Funds is one of the largest, privately owned, industrial real estate owners, developers and managers in the Chicago area. We currently have three similar development projects going in Hodgkins, West Chicago and Joliet. In addition, we also own and manage approximately 40 existing buildings with over 90 Tenants.

Sincerely,

Midwest Industrial Funds Inc.

Pat Schaner
Director of Development

MIDWEST
INDUSTRIAL FUNDS

FINAL SITE IMPROVEMENT PLANS
for
PALATINE CORPORATE CENTER

PALATINE, ILLINOIS

PROJECT NO:11061

DEVELOPER
MIDWEST INDUSTRIAL FUNDS
1211 W. 22ND STREET, SUITE 410
OAK BROOK, IL. 60523
PH: 630-230-6354

ARCHITECT
HARRIS ARCHITECTS, INC.
4801 EMERSON AVE #210
PALATINE, IL. 60067
PH: 847-624-7755

CALL J.U.L.I.E. 1-800-892-0123
WITH THE FOLLOWING:
COUNTY COOK
CITY, TOWNSHIP PALATINE
SEC. & ¼ SEC. NO. T42N, R10E, S23
48 HOURS BEFORE YOU DIG.
EXCLUDING SAT., SUN. & HOLIDAYS

BENCHMARK
ELEVATION:
DESCRIPTION: SEE SHEET GN FOR BENCHMARK INFORMATION

NOTE:
SPACECO, INC. IS TO BE NOTIFIED AT LEAST THREE (3) DAYS PRIOR TO STARTING CONSTRUCTION AND SHALL BE INCLUDED IN THE PRECONSTRUCTION MEETINGS

REVISIONS

ORIGINAL PLAN DATE: JANUARY 11TH, 2020

#	SHEET #	REMARKS	DATE
1	ALL	ISSUE FOR PERMIT	01/22/21

INDEX

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23	S1	SPECIFICATIONS
24	DET 1	DETAILS 1
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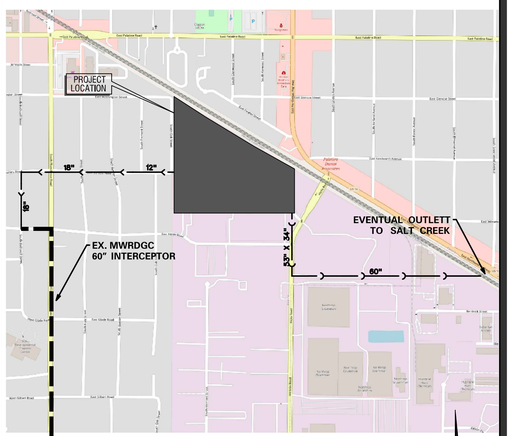
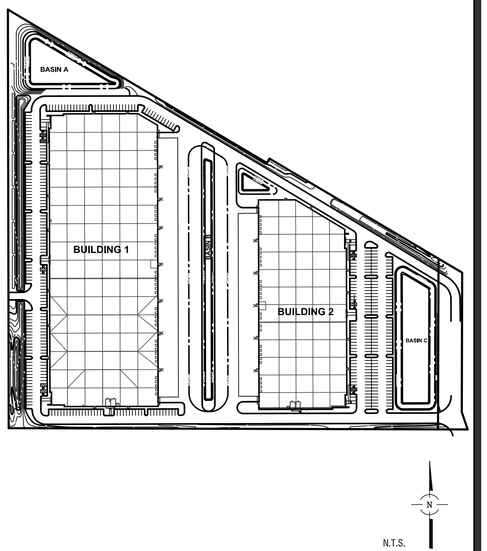
30	MWRD	MWRD PDP

LOCATION MAP

(WITH SEWER MAP)



KEY MAP



ENGINEER
DANIEL C. STEVENS, P.E.
ILLINOIS REGISTRATION NO.: 062-057634
EXPIRATION DATE: 11/30/2021

PROFESSIONAL DESIGN FIRM NO.: 184-001157
EXPIRATION DATE: 04/30/2021

01/22/21
DATE

LICENSED PROFESSIONAL ENGINEER — DANIEL C. STEVENS NO. 062-057634 — ILLINOIS

THESE PLANS OR ANY PART THEREOF SHALL BE CONSIDERED VOID WITHOUT THE SIGNATURE , SEAL, AND EXPIRATION DATE OF SEAL OF THE ENGINEER

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

SPACECO INC.

FILENAME: 11061TITLE
DATE: 01/11/20
JOB NO. 11061
SHEET C1
1 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

N:\Projects\11061\ENG\11061TITLE.dgn Default User=bmcgovern

GENERAL NOTES

1. REFERENCED CODES

A. ALL PAVEMENT AND STORM SEWER CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SSRBC), AND SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS; ADOPTED APRIL 1, 2016 BY ILLINOIS DEPARTMENT OF TRANSPORTATION AND ALL AMENDMENTS THERETO; AND IN ACCORDANCE WITH THE LATEST EDITION OF THE CODE OF THE MUNICIPALITY; EXCEPT AS MODIFIED HEREIN. IN CASE OF CONFLICT, MUNICIPAL CODE SHALL TAKE PRECEDENCE.

B. ALL SANITARY SEWER AND WATERMAIN CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, PUBLISHED JANUARY 2014, AND IN ACCORDANCE WITH THE CODE OF THE MUNICIPALITY; EXCEPT AS MODIFIED HEREIN OR BY ANY PUBLIC AGENCY PERMITS ISSUED FOR THIS WORK. IN CASE OF CONFLICT, THE MORE RESTRICTIVE PROVISIONS SHALL APPLY.

C. ALL SIDEWALK AND PUBLIC AREAS MUST BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ADA, ILLINOIS HANDICAP ACCESSIBILITY AND ANY APPLICABLE LOCAL ORDINANCES. WHEN CONFLICTS EXIST BETWEEN THE GOVERNING AGENCIES, THE MORE STRINGENT SHALL GOVERN.

D. THE CITED STANDARD SPECIFICATIONS, CODES AND PERMITS, WITH THESE CONSTRUCTION PLANS AND DETAILS, ARE ALL TO BE CONSIDERED PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE CONSIDERED A PART OF THIS CONTRACT.

2. UTILITY LOCATIONS

A. THE UTILITY COMPANIES HAVE BEEN CONTACTED IN REFERENCE TO UTILITIES THEY OWN AND OPERATE WITHIN THE LIMITS FOR THIS PROJECT. DATA FROM THESE AGENCIES HAS BEEN INCORPORATED INTO THE PLANS. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM OR ESTABLISH THE EXISTENCE OF ALL UTILITY FACILITIES AND THEIR EXACT LOCATIONS, AND TO SAFELY SCHEDULE ALL UTILITY RELOCATIONS. FOR ADDITIONAL INFORMATION, THE AGENCIES LISTED ON THIS SHEET MAY BE CONTACTED.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE ENGINEER DOES NOT WARRANT THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE PLAN. THE CONTRACTOR SHALL CALL J.U.L.I.E. AT 800-892-0123 AND THE MUNICIPALITY, FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND THE MUNICIPALITY TWENTY-FOUR (24) HOURS PRIOR TO STARTING ANY CONSTRUCTION.

C. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH LOCATIONS OF THE NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

3. UTILITY COORDINATION

A. OWNER SHALL OBTAIN EASEMENTS AND PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES. THE CONTRACTOR, HOWEVER, SHALL FURNISH ALL REQUIRED BONDS AND EVIDENCE OF INSURANCE NECESSARY TO SECURE THESE PERMITS.

B. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE NATURE AND STATUS OF ALL UTILITY RELOCATION WORK PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE THAT CONSTRUCTION OPERATIONS DO NOT INTERFERE WITH UTILITY FACILITIES AND RELOCATION WORK. THE SCHEDULE SHOULD REFLECT CONSTRUCTION SEQUENCING WHICH COORDINATES WITH ALL UTILITY RELOCATION WORK. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST THE ORDER OF ITS WORK FROM TIME TO TIME, TO COORDINATE SAME WITH UTILITY RELOCATION WORK, AND SHALL PREPARE REVISED SCHEDULE(S) IN COMPLIANCE THEREWITH AS DIRECTED BY THE OWNER.

C. THE OWNER AND THE ENGINEER SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY OPERATION REQUIRING COOPERATION WITH OTHERS. AT&T SHALL BE CONTACTED ONE MONTH PRIOR TO START OF CONSTRUCTION IN ITS UTILITY AREAS. ALL OTHER AGENCIES, UNLESS OTHERWISE NOTED, SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR TEN (10) DAYS PRIOR TO THE START OF ANY SUCH OPERATION.

4. NO PLAN SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION". PRIOR TO COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES WITH WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT SAME TO ENGINEER BEFORE DOING ANY WORK, OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTIONS ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

5. ALL PROPOSED ELEVATIONS SHOWN ON THE PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS OTHERWISE SPECIFIED.

6. UPON AWARDING OF THE CONTRACT, AND WHEN REQUIRED BY THE MUNICIPALITY OR OWNER, THE CONTRACTOR SHALL FURNISH A LABOR, MATERIAL AND PERFORMANCE BOND IN THE AMOUNT REQUIRED GUARANTEEING COMPLETION OF THE WORK. THE UNDERWRITER SHALL BE ACCEPTABLE TO THE MUNICIPALITY OR OWNER, AS APPROPRIATE.

7. THE CONTRACTORS SHALL PLAN THEIR WORK BASED ON THEIR OWN BORINGS, EXPLORATIONS AND OBSERVATIONS TO DETERMINE SOIL CONDITIONS AT THE LOCATION OF THE PROPOSED WORK. HOWEVER, IF THE OWNER HAS A SOILS REPORT, THE RESULTS WILL BE AVAILABLE FROM THE OWNER UPON WRITTEN REQUEST.

8. CONTRACTOR SHALL VIDEO TAPE WORK AREA PRIOR TO CONSTRUCTION FOR THE PURPOSE OF DOCUMENTING EXISTING CONDITIONS.

9. COMMENCING CONSTRUCTION

A. THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR HIS REPRESENTATIVE AND THE AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE FULL WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY AS NECESSARY, ALL TESTING AGENCIES, EITHER MUNICIPALITY'S OR THE OWNER'S, SUFFICIENTLY IN ADVANCE OF CONSTRUCTION, ALL MATERIAL TESTING SHALL BE THE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR, THE TESTING AGENCY SHALL MEET THE APPROVAL OF THE OWNER.

B. FAILURE OF CONTRACTOR TO ALLOW PROPER NOTIFICATION TIME WHICH RESULTS IN TESTING COMPANIES TO BE UNABLE TO VISIT SITE AND PERFORM TESTING WILL CAUSE CONTRACTOR TO SUSPEND OPERATION (PERTAINING TO TESTING) UNTIL TESTING AGENCY CAN SCHEDULE TESTING OPERATIONS. COST OF SUSPENSION OF WORK TO BE BORNE BY CONTRACTOR.

10. ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL TYPES OF TRAFFIC. AT NO TIME SHALL ACCESS BE DENIED TO ADJACENT PROPERTIES.

11. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED. ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE DEVELOPER'S ENGINEER AT CONTRACTOR'S COST.

12. ANY EXISTING SIGNS, LIGHT STANDARDS AND UTILITY POLES WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND NOT NOTED FOR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT HIS OWN EXPENSE AS SHOWN ON THE ENGINEERING PLANS OR AS DIRECTED BY THE DEVELOPER. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE SATISFACTION OF THE OWNER. ANY SIGNS NOT REQUIRED TO BE RESET, SHALL BE DELIVERED TO THE RESPECTIVE OWNERS.

13. REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CULVERTS, ETC. SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE. HE IS RESPONSIBLE FOR ANY PERMIT REQUIRED FOR SUCH DISPOSAL.

14. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM OR SHALL BE RESTORED TO PROPER OPERATING CONDITION. A RECORD OF THE LOCATION OF ALL FIELD TILE OR DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER, DEVELOPER OR MUNICIPAL ENGINEER UPON COMPLETION OF THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

15. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ON THE JOB.

16. THE CONTRACTOR SHALL COLLECT AND REMOVE ALL CONSTRUCTION DEBRIS, EXCESS MATERIALS, TRASH, OIL AND GREASE RESIDUE, MACHINERY, TOOLS AND OTHER MISCELLANEOUS ITEMS WHICH WERE NOT PRESENT PRIOR TO PROJECT COMMENCEMENT AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY AND ALL PERMITS NECESSARY FOR THE HAULING AND DISPOSAL REQUIRED FOR CLEAN-UP AS DIRECTED BY THE ENGINEER OR OWNER. BURNING ON THE SITE IS NOT PERMITTED.

17. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS SPECIFICALLY NOTED ON THE PLANS.

18. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED UNDER THE PROVISIONS OF (SSRBC) ARTICLE 201.05.

19. LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE LANDSCAPE ARCHITECT MEETING THE OWNER'S APPROVAL AND SHALL BE UNDERTAKEN IN A TIMELY FASHION SO AS NOT TO INTERFERE WITH CONSTRUCTION.

20. ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE OFF-SITE.

21. ALL CUTS OVER 1" IN DIAMETER SHALL BE MADE FLUSH WITH THE NEXT LARGE BRANCH. WOUNDS OVER 1" IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE PAINT.

22. GENERAL EXCAVATION/UNDERGROUND NOTES

A. SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH CODES AND ORDINANCES HAVING JURISDICTION. SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE EITHER BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN A SAFE CONDITION UNTIL COMPLETION OF BACKFILLING.

B. PROVIDE MATERIALS FOR SHORING AND BRACING, SUCH AS SHEET PILING, UPRIGHTS, STRINGERS AND CROSS BRACES, IN GOOD SERVICEABLE CONDITION. PROVIDE MINIMUM REQUIREMENTS FOR TRENCH SHORING AND BRACING TO COMPLY WITH CODES AND AUTHORITIES HAVING JURISDICTION. MAINTAIN SHORING AND BRACING IN EXCAVATIONS REGARDLESS OF TIME PERIOD EXCAVATIONS WILL BE OPEN. CARRY DOWN SHORING AND BRACING AS EXCAVATION PROGRESSES IN ACCORDANCE WITH OSHA AND GOVERNING AUTHORITY.

C. PREVENT SURFACE WATER AND SUBSURFACE OR GROUNDWATER FROM FLOWING INTO EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. PROVIDE AND MAINTAIN PUMPS, SUMPS, SUCTION AND DISCHARGE LINES AND OTHER DEWATERING SYSTEM COMPONENTS NECESSARY TO CONVEY WATER AWAY FROM EXCAVATIONS. CONVEY WATER REMOVED FROM EXCAVATIONS AND RAINWATER TO COLLECTING OR RUN-OFF AREAS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. PROVIDE AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS FOR EACH STRUCTURE. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.

D. IMMEDIATELY REPORT CONDITIONS THAT MAY CAUSE UNSOUND BEARING TO THE OWNER/DEVELOPER BEFORE CONTINUING WORK.

23. FINAL ACCEPTANCE

A. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT AND THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DEFECTS IN MATERIALS AND WORKMANSHIP OF WHATEVER NATURE DURING THAT PERIOD. THIS GUARANTEE SHALL BE PROVIDED IN THE FORM OF MAINTENANCE BOND IN THE AMOUNT OF 10% OF THE COST OF IMPROVEMENTS.

B. BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED BY THE OWNER OR HIS REPRESENTATIVE. FINAL PAYMENT WILL BE MADE AFTER ALL THE CONTRACTOR'S WORK HAS BEEN APPROVED AND ACCEPTED.

C. NO UNDERGROUND WORK SHALL BE COVERED UNTIL IT HAS BEEN APPROVED BY THE MUNICIPALITY. APPROVAL TO PROCEED MUST BE OBTAINED FROM THE MUNICIPALITY PRIOR TO INSTALLING PAVEMENT BASE, BINDER, SURFACE, AND PRIOR TO PLACING ANY CONCRETE AFTER FORMS HAVE BEEN SET.

D. AT THE CLOSE OF EACH WORKING DAY AND AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS.

24. UNDERGROUND NOTES

A. UNDERGROUND WORK SHALL INCLUDE TRENCHING, INSTALLATION OF PIPE, CASTINGS, STRUCTURES, BACKFILLING OF TRENCHES AND COMPACTION AND TESTING AS SHOWN ON THE CONSTRUCTION PLANS. FITTINGS AND ACCESSORIES NECESSARY TO COMPLETE THE WORK MAY NOT BE SPECIFIED, BUT SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF THE CONTRACT.

B. WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, EXISTING DRAINAGE STRUCTURES AND SYSTEMS SHALL BE CLEANED OF DEBRIS AND PATCHED AS NECESSARY TO ASSURE INTEGRITY OF THE STRUCTURE. THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STRUCTURES AND CONTRACT UNIT PRICE PER LINEAL FOOT FOR SYSTEMS WHICH SHALL BE PAYMENT IN FULL FOR CLEANING, PATCHING, REMOVAL AND DISPOSAL OF DEBRIS AND DIRT. DRAINAGE STRUCTURES AND SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS EXPENSE. NO PAYMENT WILL BE MADE FOR CLEANING STRUCTURES OR SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT.

C. ANY DEWATERING OF SEWER AND WATER TRENCHES AS WELL AS TEMPORARY SHEETING OR BRACING THAT MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL NOT BE CONSIDERED EXTRA WORK UNLESS THERE IS A SPECIFIC LINE ITEM FOR DEWATERING. IN THE EVENT THAT SOFT MATERIALS WITH UNCONFINED COMPRESSIVE STRENGTH LESS THAN 0.5 TSF ARE ENCOUNTERED IN SEWER CONSTRUCTION, THE CONTRACTOR SHALL (UPON APPROVAL OF THE OWNER AND/OR ENGINEER) OVER-EXCAVATE TO A DEPTH OF ONE (1) FOOT BELOW THE BOTTOM OF THE PIPE AND BACKFILL WITH COMPACTED CRUSHED STONE, PROPERLY FORMED TO FIT THE BOTTOM OF THE PIPE.

D. TRENCH BACKFILL WILL BE REQUIRED FOR THE FULL TRENCH DEPTH WITHIN TWO (2) FEET OF PROPOSED OR EXISTING PAVEMENTS, UTILITIES, DRIVEWAYS, AND SIDEWALKS AND EXTENDING A DISTANCE EQUAL TO A 1:1 SLOPE FROM SUBGRADE ELEVATION TO TOP OF PIPE. THE TRENCH BACKFILL SHALL CONSIST OF GRANULAR MATERIAL MEETING IDOT CA-6 GRADATION. THE TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH (SSRBC) SPECIFICATIONS. JETTING WITH WATER SHALL NOT BE PERMITTED. THE COST OF SUCH CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THIS CONTRACT AND SHALL BE INCLUDED IN THE UNIT PRICE OF THE PIPE. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

E. THE CONTRACTOR SHALL INSTALL A 4" X 4" X 8" (NOMINAL) POST AT THE TERMINUS OF THE SANITARY, WATER AND STORM SERVICE, SANITARY AND STORM MANHOLES, CATCH BASINS, INLETS AND WATER VAULTS. THE POST SHALL EXTEND 4' ABOVE THE GROUND. THE TOP 12" OF SAID POST SHALL BE PAINTED AS FOLLOWS: SANITARY - RED, WATERMAIN - BLUE, STORM - GREEN.

F. AFTER THE STORM SEWER SYSTEM HAS BEEN CONSTRUCTED, THE CONTRACTOR SHALL PLACE EROSION CONTROL AT REAR YARD INLET LOCATIONS, AND AT OTHER LOCATIONS SELECTED BY THE ENGINEER, TO MINIMIZE THE AMOUNT OF SILTATION WHICH NORMALLY WOULD ENTER THE STORM SEWER SYSTEM.

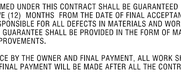
G. HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ON THE ROAD SUBGRADES. WHENEVER POSSIBLE, HOSES SHALL BE USED TO DIRECT THE WATER INTO LOT AREAS OR THE STORM SEWER SYSTEM (IF AVAILABLE). DAMAGE TO THE ROAD SUBGRADE OR LOT GRADING DUE TO EXCESSIVE WATER SATURATION AND/OR EROSION FROM HYDRANT FLUSHING, OR FROM LEAKS IN THE WATER DISTRIBUTION SYSTEM, WILL BE REPAIRED BY THE CONTRACTOR AT HIS COST.

H. ALL TOP OF FRAMES FOR STORM AND SANITARY SEWERS AND VALVE VAULT COVERS ARE TO BE ADJUSTED TO MEET FINAL FINISH GRADE. THIS ADJUSTMENT IS TO BE MADE BY THE SEWER AND WATER CONTRACTOR AND THE COST IS TO BE CONSIDERED INCIDENTAL. THESE ADJUSTMENTS TO FINISHED GRADE WILL NOT ALLEVIATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE MUNICIPALITY UPON FINAL INSPECTION OF THE PROJECT. FINAL GRADES TO BE DETERMINED BY THE MUNICIPALITY AT THE TIME OF FINAL INSPECTION AND MAY VARY FROM PLAN GRADE.)

I. SLEEVES FOR UTILITY (COMED, TELEPHONE, ETC.) STREET CROSSING, SHALL BE INSTALLED WHERE DIRECTED BY THE OWNER. SLEEVES SHALL BE 6" PVC INSTALLED 36" BELOW THE TOP OF CURB AND EXTEND TWO FEET OUTSIDE THE CURB. TRENCH SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL.

J. THE CONTRACTOR SHALL VERIFY THE SIZE AND INVERT ELEVATION OF ALL CONNECTIONS TO AVOID ANY CONFLICTS BEFORE STARTING WORK. NOTIFY OWNER OF ANY DISCREPANCIES.

25. IT SHALL BE UNDERSTOOD THAT NEITHER THE MUNICIPALITY, ITS OFFICIALS, CONSULTANTS, NOR ITS EMPLOYEES ARE AGENTS OF OR REPRESENTATIVES OF THE OWNER. NONE-THE-LESS, THE MUNICIPALITY, ITS OFFICIALS AND EMPLOYEES ARE TO BE PROVIDED SAFE ACCESS TO ALL PHASES OF ALL WORK PERFORMED ON THE PROJECT SITE TO MONITOR THE QUALITY OF THE WORK AND ASSURE ITS CONFORMITY WITH THE PLANS AND SPECIFICATIONS. THERE SHALL BE NO PERSONAL LIABILITY UPON ANY OFFICIAL OR EMPLOYEE OF THE MUNICIPALITY ON ACCOUNT OF ACTIONS TAKEN OR NOT TAKEN IN THE COURSE OF THEIR WORK. THE CONTRACTOR MUST AT ALL TIMES MAINTAIN A SAFE ACCESS TO THE WORK FOR INSPECTORS. "SAFE" : MEANING CONDITIONS COMPLYING WITH ALL PROVISIONS OF ALL APPLICABLE AND RECOGNIZED SAFETY STANDARDS, FEDERAL, STATE AND LOCAL. IF ACCESS IS NOT SAFE AND INSPECTIONS CANNOT BE MADE UNDER SAFE CONDITIONS, THE INSPECTOR CAN ORDER CESSATION OF THE WORK SO AFFECTED UNTIL SUCH TIME AS CONTRACTOR PROVIDES SAFE ACCESS.

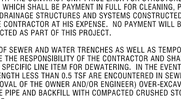


SN= 1.5" x 0.40 = 0.60
2.0" x 0.40 = 0.66
10" x 0.40 = 1.30
2.56

TYPICAL ASPHALT PAVEMENT SECTION

N.T.S.

1. 1.5" BITUMINOUS CONCRETE SURFACE COURSE, HOT-MIX ASPHALT, MIX "D", N50
2. 2.0" BITUMINOUS CONCRETE BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
3. 10" CRUSHED AGGREGATE BASE COURSE, IDOT CA-6
4. COMPACTED AND STABLE SUBGRADE

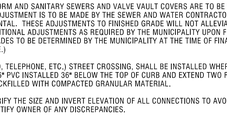


SN= 2.0" x 0.40 = 0.80
3.0" x 0.40 = 0.99
12" x 0.40 = 1.56
3.35

TYPICAL ASPHALT PAVEMENT SECTION (HEAVY DUTY - TRUCK AREAS)

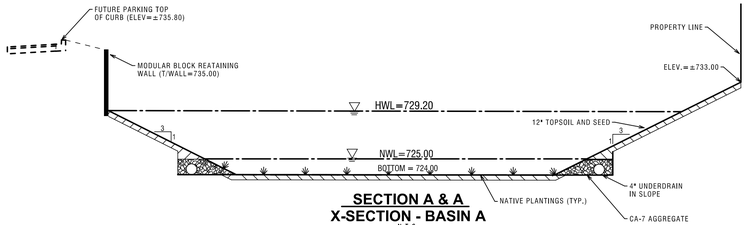
N.T.S.

1. 2.0" BITUMINOUS CONCRETE SURFACE COURSE, HOT-MIX ASPHALTM MIX "D", N50
2. 3.0" BITUMINOUS CONCRETE BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
3. 12" CRUSHED AGGREGATE BASE COURSE, IDOT CA-6
4. COMPACTED AND STABLE SUBGRADE

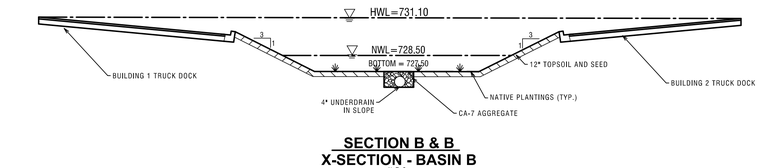


TYPICAL CONCRETE PAVEMENT SECTION LOADING DOCK

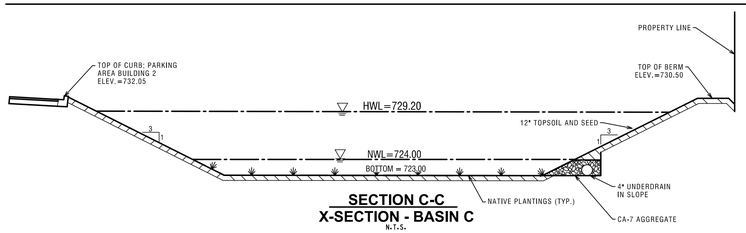
N.T.S.



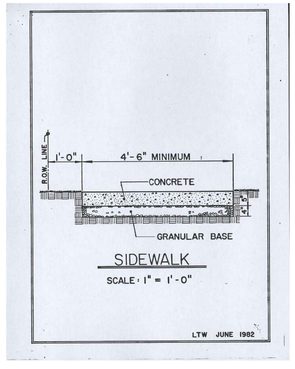
SECTION A & A
X-SECTION - BASIN A
N.T.S.



SECTION B & B
X-SECTION - BASIN B
N.T.S.



SECTION C-C
X-SECTION - BASIN C
N.T.S.



LEGEND

EXISTING	DESCRIPTION	PROPOSED
	DRAIN TILE	
	STORM SEWER	
	SANITARY SEWER	
	SANITARY TRUNK SEWER	
-W 8" W-	WATER MAIN (WITH SIZE)	W 8"
	PIPE TRENCH BACKFILL	
G G	GAS MAIN	G G
T T	TELEPHONE LINES	T T
E E	ELECTRIC LINE	E E
X	FENCE	X
	RIGHT-OF-WAY	
	EASEMENT	
	PROPERTY LINE	
	SETBACK LINE	
	CENTERLINE	
680	CONTOUR	680
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	INLET	
	FIRE HYDRANT	
	PRESSURE CONNECTION	
	PIPE REDUCER	
	VALVE AND VAULT, VALVE	
	FLARED END SECTION	
	STREET LIGHT	
	UTILITY POLE	
	CONTROL POINT	
	SIGN	
XXX.XX	SPOT ELEVATION	XXX.XX
	SOIL BORING	
	OVERLAND FLOW ROUTE	
	DRAINAGE SLOPE	OR
	GUARDRAIL	
	WATER'S EDGE	
	CONCRETE	
	REVERSE PITCH CURB	
	TREE, FIR TREE, BUSH, & PROPOSED TREE TO REMOVE	

ABBREVIATIONS

M = STORM MANHOLE	I = INVERT OR INLET	T/P = TOP OF PIPE
S = SANITARY MANHOLE	TF = TOP OF FOUNDATION	B/P = BOTTOM OF PIPE
CB = CATCH BASIN	GF = GARAGE FLOOR	WM = WATERMAIN
LP = LIGHT POLE	TC = TOP OF CURB	SAN = SANITARY SEWER
VV = VALVE VAULT	TD = TOP OF DEPRESSED CURB	STM = STORM SEWER
E = END SECTION	TW = TOP OF RETAINING WALL	LO = LOOK OUT
FH = FIRE HYDRANT	BW = BOTTOM OF RETAINING WALL	PLO = PARTIAL LOOK OUT
GR = GRADE RING (HYDRANT)	OP = OUTLET OF PIPE	

PERMITS

DESCRIPTION	LOG NO.	PERMIT NO.	DATE ISSUED

BENCHMARK

CONTACT INFORMATION

NO.	DATE	REMARKS

LEGEND

STORM SEWER	SANITARY MANHOLE	HAND HOLE	CUT CROSS
SANITARY SEWER	STORM MANHOLE	STREET LIGHT	PK / MAG NAIL
COMBINED SEWER	CATCH BASIN	UTILITY POLE	RAILROAD SPIKE
WATER MAIN	INLET	TRAFFIC SIGNAL	SOIL BORING
GAS MAIN	FLARED END SECTION	TRAFFIC SIGNAL BOX	
UNDERGROUND TELEPHONE LINE	ELECTRIC MANHOLE	SPRINKLER HEAD	TREE WITH SIZE
UNDERGROUND ELECTRIC LINE	TELEPHONE MANHOLE	BOLLARD	
UNDERGROUND CATV LINE	TELEPHONE UPRIGHT	MAILBOX	FIR TREE WITH SIZE
OVERHEAD WIRE(S) ON UTILITY POLES	ELECTRIC UPRIGHT	SIGN	
FIBER OPTIC LINE	CABLE TV UPRIGHT	UNIDENTIFIED MANHOLE	BUSH
RAILROAD	FIRE HYDRANT	CONTOUR	
FENCE	WATER VALVE	SPOT ELEVATION	ASPHALT
GUARDRAIL	B BOX	RIGHT-OF-WAY MONUMENT	CONCRETE
EDGE OF WATER	AUXILARY VALVE	DISC	
WETLAND LIMITS	WELL	IRON / STEEL ROD	GRAVEL
	GAS VALVE	IRON PIPE	

NOTE:

UNDERGROUND UTILITIES ARE SHOWN BY USING PHYSICAL EVIDENCE FOUND ON THE SURFACE AND/OR FROM UTILITY COMPANY FIELD STAKES AND, THEREFORE, THEIR LOCATIONS ARE APPROXIMATE AND SUSPECTED AND MAY NOT BE COMPLETELY ACCURATE. FOR MORE ACCURATE LOCATION, FIELD EXCAVATE.

PIPE FLOW DIRECTIONS, IF SHOWN, ARE BASED ON FIELD INVERT ELEVATIONS UNLESS EXISTING PLANS INDICATE OTHERWISE, IN WHICH CASE THE EXISTING PLAN FLOW DIRECTION IS SHOWN.

LAST DATE OF FIELD WORK:

N

SCALE 1" = 30'

0 30 60

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

EXISTING CONDITIONS - 1

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061ET01

DATE: 01/11/20

JOB NO. 11061

SHEET ET1
3 OF 30

MATCH LINE - SEE SHEET ET3

MATCH LINE - SEE SHEET ET2

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

MATCH LINE - SEE SHEET ET1

MATCH LINE - SEE SHEET ET3

NOTES:

SEE SHEET ET1 FOR NOTES AND LEGEND

SCALE 1" = 30'

0 30 60

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

EXISTING CONDITIONS - 2

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061ET02

DATE: 01/11/20

JOB NO. 11061

SHEET ET2

4 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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MATCH LINE - SEE SHEET ET2

MATCH LINE - SEE SHEET ET2

ONE STORY BRICK BUILDING

ONE STORY BRICK BUILDING

SCALE 1" = 30'
0 30 60

NOTES:
SEE SHEET GM1 FOR NOTES AND LEGEND

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

EXISTING CONDITIONS- 3

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 698-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME:
11061ET03

DATE:
01/11/20

JOB NO.
11061

SHEET
ET3
5 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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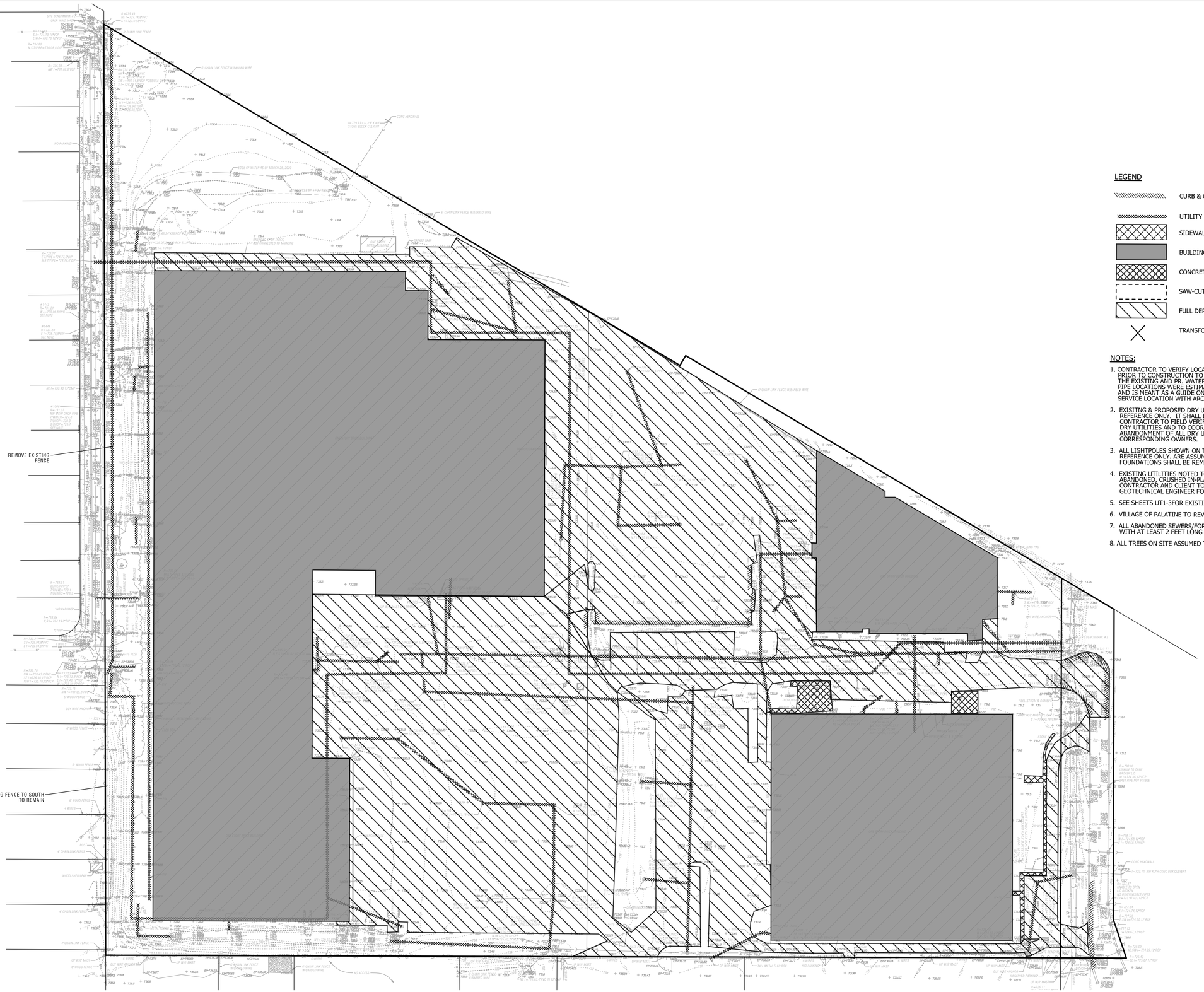

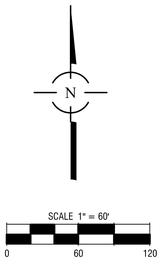

LEGEND

- CURB & GUTTER, RETAINING WALL, FENCE REMOVAL
- UTILITY REMOVAL
- SIDEWALK REMOVAL
- BUILDING REMOVAL
- CONCRETE SIDEWALK/DRIVEWAY REMOVAL
- SAW-CUT FULL DEPTH
- FULL DEPTH PAVEMENT REMOVAL
- TRANSFORMER/HVAC/SIGN REMOVAL

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF ALL EX. UTILITIES PRIOR TO CONSTRUCTION TO VERIFY ANY CONFLICTS WITH THE EXISTING AND PR. WATERMAIN & SANITARY SEWERS. PIPE LOCATIONS WERE ESTIMATED THE FIELD SURVEY OBSERVATIONS AND IS MEANT AS A GUIDE ONLY. CONTRACTOR TO VERIFY BUILDING SERVICE LOCATION WITH ARCH. PLANS PREPARED BY OTHERS.
2. EXISITNG & PROPOSED DRY UTILITIES ARE SHOWN FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION OF EXISTING DRY UTILITIES AND TO COORDINATE THE REMOVAL OR ABANDONMENT OF ALL DRY UTILITIES WITH THEIR CORRESPONDING OWNERS.
3. ALL LIGHTPOLES SHOWN ON THE PLANS ARE FOR LOCATION AND REFERENCE ONLY. ARE ASSUMED TO BE DEMOLISHED. LIGHT POLE FOUNDATIONS SHALL BE REMOVED.
4. EXISTING UTILITIES NOTED TO BE REMOVED SHALL BE REMOVED ABANDONED, CRUSHED IN-PLACE, OR FILLED, AS NECESSARY. CONTRACTOR AND CLIENT TO CONSULT WITH PROJECT GEOTECHNICAL ENGINEER FOR DIRECTION.
5. SEE SHEETS UT1-3FOR EXISTING STORM SEWER REMOVAL LOCATIONS.
6. VILLAGE OF PALATINE TO REVIEW STREETSCAPE REMOVAL LIMITS/IMPACTS.
7. ALL ABANDONED SEWERS/FORCEMAINS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUGS.
8. ALL TREES ON SITE ASSUMED TO BE REMOVED.

NO.	DATE	REMARKS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

DEMOLITION PLAN

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061DEMO

DATE: 01/11/20

JOB NO. 11061

SHEET
DEMO
6 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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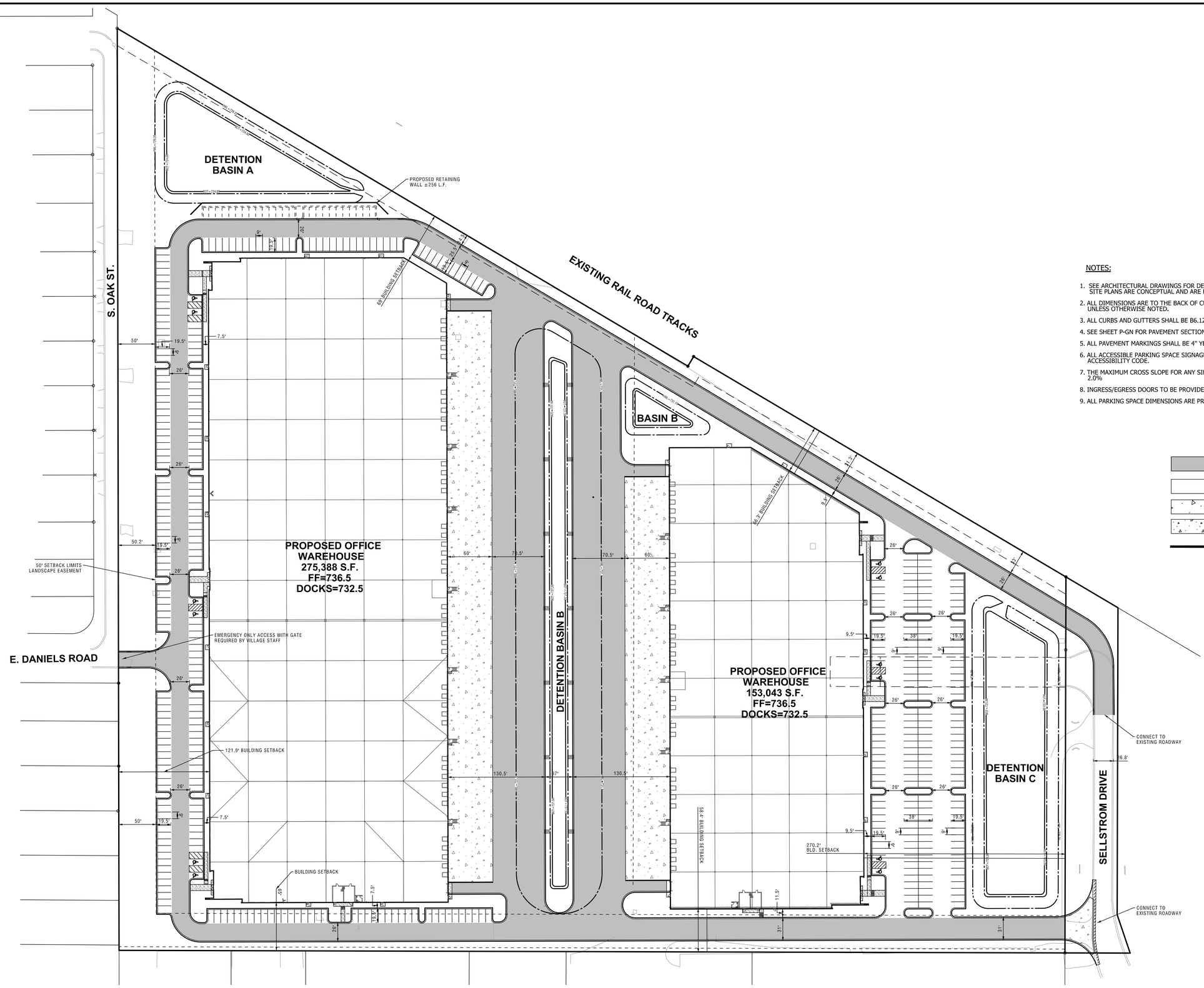


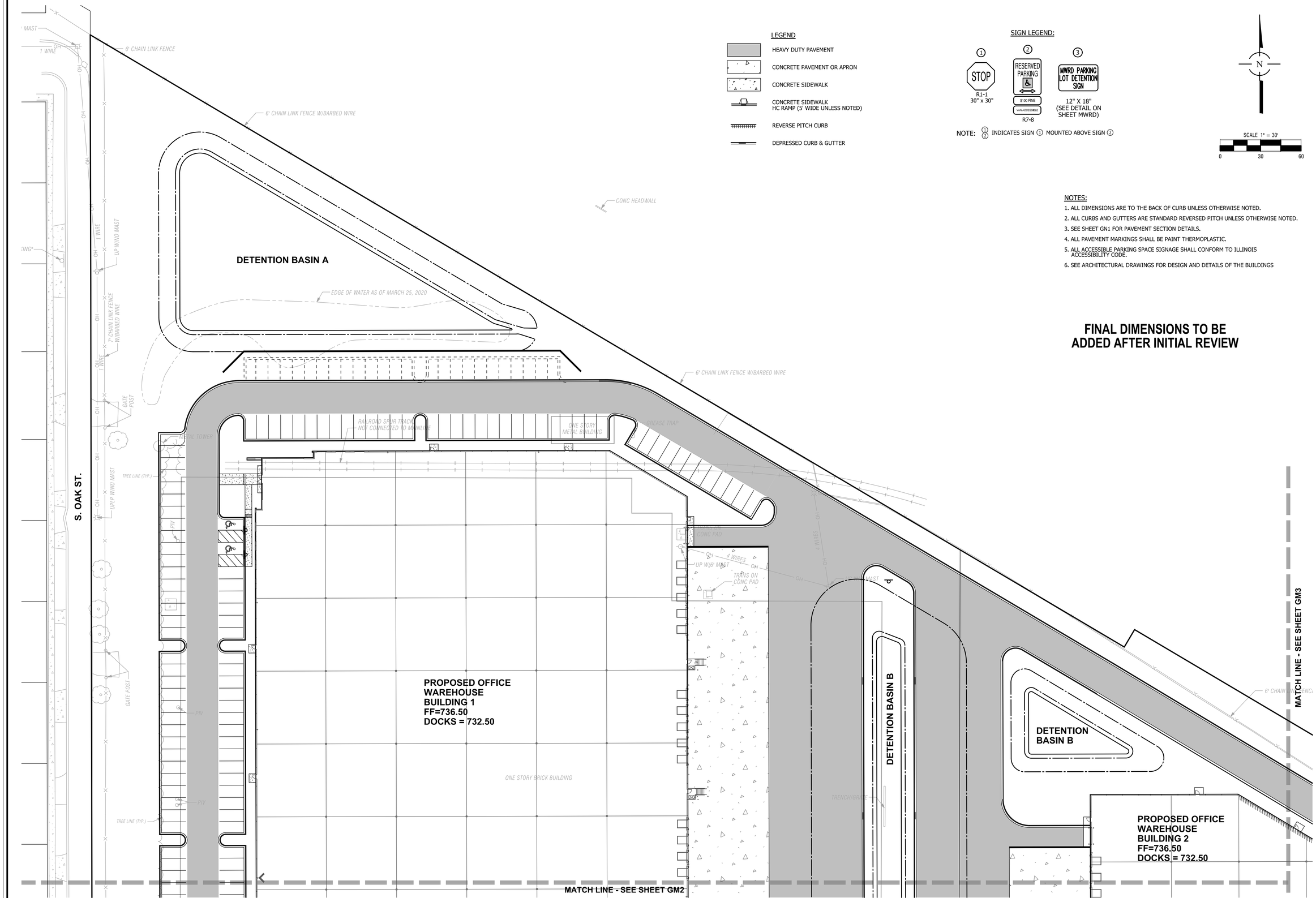
NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR DESIGN AND DETAILS OF THE BUILDINGS; SITE PLANS ARE CONCEPTUAL AND ARE FOE PLANNING PURPOSES ONLY.
2. ALL DIMENSIONS ARE TO THE BACK OF CURB, BUILDING FOUNDATION, OR PROPERTY LINE UNLESS OTHERWISE NOTED.
3. ALL CURBS AND GUTTERS SHALL BE B6.12.
4. SEE SHEET P-GN FOR PAVEMENT SECTION DETAILS.
5. ALL PAVEMENT MARKINGS SHALL BE 4" YELLOW PAINT.
6. ALL ACCESSIBLE PARKING SPACE SIGNAGE SHALL CONFORM TO ILLINOIS ACCESSIBILITY CODE.
7. THE MAXIMUM CROSS SLOPE FOR ANY SIDEWALK OR PATH SHALL NOT EXCEED 2.0%
8. INGRESS/EGRESS DOORS TO BE PROVIDED BY OWNER AND COORDINATION REQUIRED.
9. ALL PARKING SPACE DIMENSIONS ARE PROPOSED TO BE 19' X 9'

LEGEND

- HEAVY DUTY PAVEMENT
- STANDARD DUTY PAVEMENT
- CONCRETE DOCKS OR APRON
- CONCRETE SIDEWALK
- PROPOSED RETAINING WALL

NO.	DATE	REMARKS



LEGEND

- HEAVY DUTY PAVEMENT
- CONCRETE PAVEMENT OR APRON
- CONCRETE SIDEWALK
- CONCRETE SIDEWALK HC RAMP (5' WIDE UNLESS NOTED)
- REVERSE PITCH CURB
- DEPRESSED CURB & GUTTER

SIGN LEGEND:

① STOP R1-1 30" x 30"

② RESERVED PARKING $100 FINE VAN ACCESSIBLE R7-8

③ MWRD PARKING LOT DETENTION SIGN 12" X 18" (SEE DETAIL ON SHEET MWRD)

NOTE: ①/② INDICATES SIGN ① MOUNTED ABOVE SIGN ②

N

SCALE 1" = 30'
0 30 60

NOTES:

1. ALL DIMENSIONS ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CURBS AND GUTTERS ARE STANDARD REVERSED PITCH UNLESS OTHERWISE NOTED.
3. SEE SHEET GN1 FOR PAVEMENT SECTION DETAILS.
4. ALL PAVEMENT MARKINGS SHALL BE PAINT THERMOPLASTIC.
5. ALL ACCESSIBLE PARKING SPACE SIGNAGE SHALL CONFORM TO ILLINOIS ACCESSIBILITY CODE.
6. SEE ARCHITECTURAL DRAWINGS FOR DESIGN AND DETAILS OF THE BUILDINGS

FINAL DIMENSIONS TO BE ADDED AFTER INITIAL REVIEW

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

GEOMETRIC PLAN - 1

PALATINE CORPORATE CENTER

PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061GM01

DATE: 01/11/20

JOB NO. 11061

SHEET GM1 8 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

MATCH LINE - SEE SHEET GM1

S. OAK ST.

E. DANIELS ROAD

PROPOSED OFFICE
WAREHOUSE
BUILDING 1
FF=736.50
DOCKS = 732.50

PROPOSED OFFICE
WAREHOUSE
BUILDING 2
FF=736.50
DOCKS = 732.50

DETENTION BASIN B

MATCH LINE - SEE SHEET GM3

ONE STORY BRICK BUILDING

NOTES:

SEE SHEET GM1 FOR NOTES AND LEGEND

SCALE 1" = 30'
0 30 60

FINAL DIMENSIONS TO BE ADDED AFTER INITIAL REVIEW

NO.	DATE	REMARKS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

GEOMETRIC PLAN - 2

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061GM02

DATE: 01/11/20

JOB NO. 11061

SHEET GM2
9 OF 30

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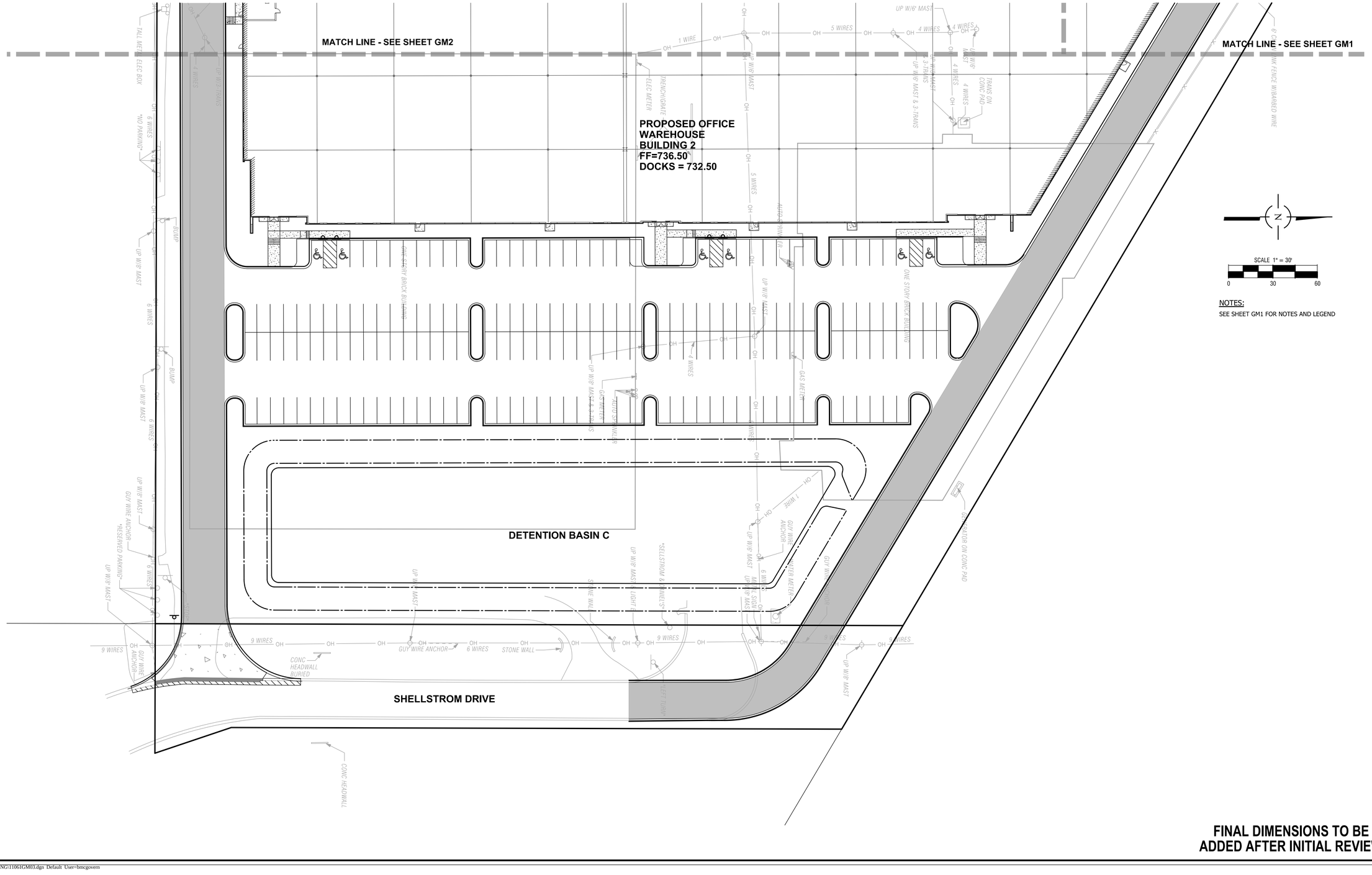
Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



NOTES:

SEE SHEET GM1 FOR NOTES AND LEGEND

SCALE 1" = 30'

0 30 60

FINAL DIMENSIONS TO BE ADDED AFTER INITIAL REVIEW

NO.	DATE	REMARKS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

GEOMETRIC PLAN - 3

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061GM03

DATE: 01/11/20

JOB NO. 11061

SHEET **GM3**

10 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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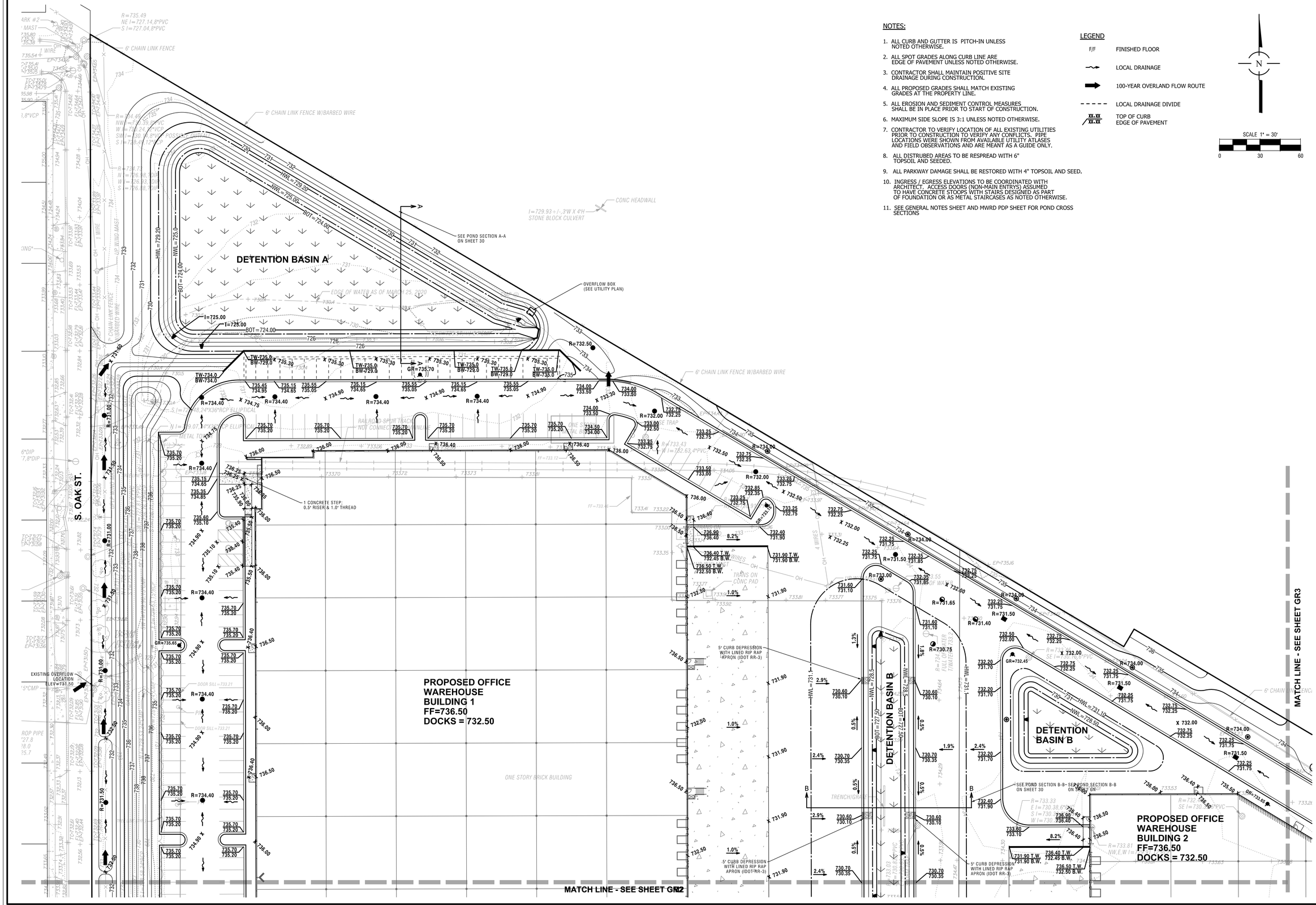

NOTES:

1. ALL CURB AND GUTTER IS PITCH-IN UNLESS NOTED OTHERWISE.
2. ALL SPOT GRADES ALONG CURB LINE ARE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL MAINTAIN POSITIVE SITE DRAINAGE DURING CONSTRUCTION.
4. ALL PROPOSED GRADES SHALL MATCH EXISTING GRADES AT THE PROPERTY LINE.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO START OF CONSTRUCTION.
6. MAXIMUM SIDE SLOPE IS 3:1 UNLESS NOTED OTHERWISE.
7. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY ANY CONFLICTS. PIPE LOCATIONS WERE SHOWN FROM AVAILABLE UTILITY ATLASES AND FIELD OBSERVATIONS AND ARE MEANT AS A GUIDE ONLY.
8. ALL DISTRUBED AREAS TO BE RESPREAD WITH 6" TOPSOIL AND SEEDED.
9. ALL PARKWAY DAMAGE SHALL BE RESTORED WITH 4" TOPSOIL AND SEED.
10. INGRESS / EGRESS ELEVATIONS TO BE COORDINATED WITH ARCHITECT. ACCESS DOORS (NON-MAIN ENTRYS) ASSUMED TO HAVE CONCRETE STOOPS WITH STAIRS DESIGNED AS PART OF FOUNDATION OR AS METAL STAIRCASES AS NOTED OTHERWISE.
11. SEE GENERAL NOTES SHEET AND MWRD PDP SHEET FOR POND CROSS SECTIONS

LEGEND

F/F	FINISHED FLOOR
	LOCAL DRAINAGE
	100-YEAR OVERLAND FLOW ROUTE
	LOCAL DRAINAGE DIVIDE
XX.XX / XX.XX	TOP OF CURB / EDGE OF PAVEMENT

N

SCALE 1" = 30'

0 30 60

NO.	DATE	REMARKS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

GRADING PLAN - 1

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061GR01

DATE: 01/11/20

JOB NO. 11061

SHEET GR1
11 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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MATCH LINE - SEE SHEET GR1

MATCH LINE - SEE SHEET GR3

S. OAK ST.

E. DANIELS ROAD

PROPOSED OFFICE
WAREHOUSE
BUILDING 1
FF=736.50
DOCKS = 732.50

PROPOSED OFFICE
WAREHOUSE
BUILDING 2
FF=736.50
DOCKS = 732.50

DETENTION BASIN B

5' CURB DEPRESSION WITH LINED RIP RAP APRON (IDOT RR-3)

2 CONCRETE STEPS; 0.50' RISER; 1.0' THREAD

METAL STAIRCASE (TO BE COORDINATED WITH ARCHITECT)

PROPOSED 2' DROP FOUNDATION

SCALE 1" = 30'

0 30 60

NOTES:

SEE SHEET GR1 FOR NOTES AND LEGEND

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

GRADING PLAN - 2

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061GR02

DATE: 01/11/20

JOB NO. 11061

SHEET GR2

12 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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MATCH LINE - SEE SHEET GR2

MATCH LINE - SEE SHEET GR1

PROPOSED OFFICE WAREHOUSE BUILDING 2
FF=736.50
DOCKS = 732.50

DETENTION BASIN C

SHELLSTROM DRIVE

4 CONCRETE STEPS: 0.5' RISER & 1.0' THREAD

METAL STAIRCASE (TO BE COORDINATED WITH ARCHITECT)

EMERGENCY OVERFLOW WEIR (SEE DETAIL ON SHEET 06) SEE POND SECTION C-C ON SHEET GR

NOTES:

SEE SHEET GR1 FOR NOTES AND LEGEND

SCALE 1" = 30'

0 30 60

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

GRADING PLAN - 3

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
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Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061GR03

DATE: 01/11/20

JOB NO. 11061

SHEET GR3

13 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Rd. & 1 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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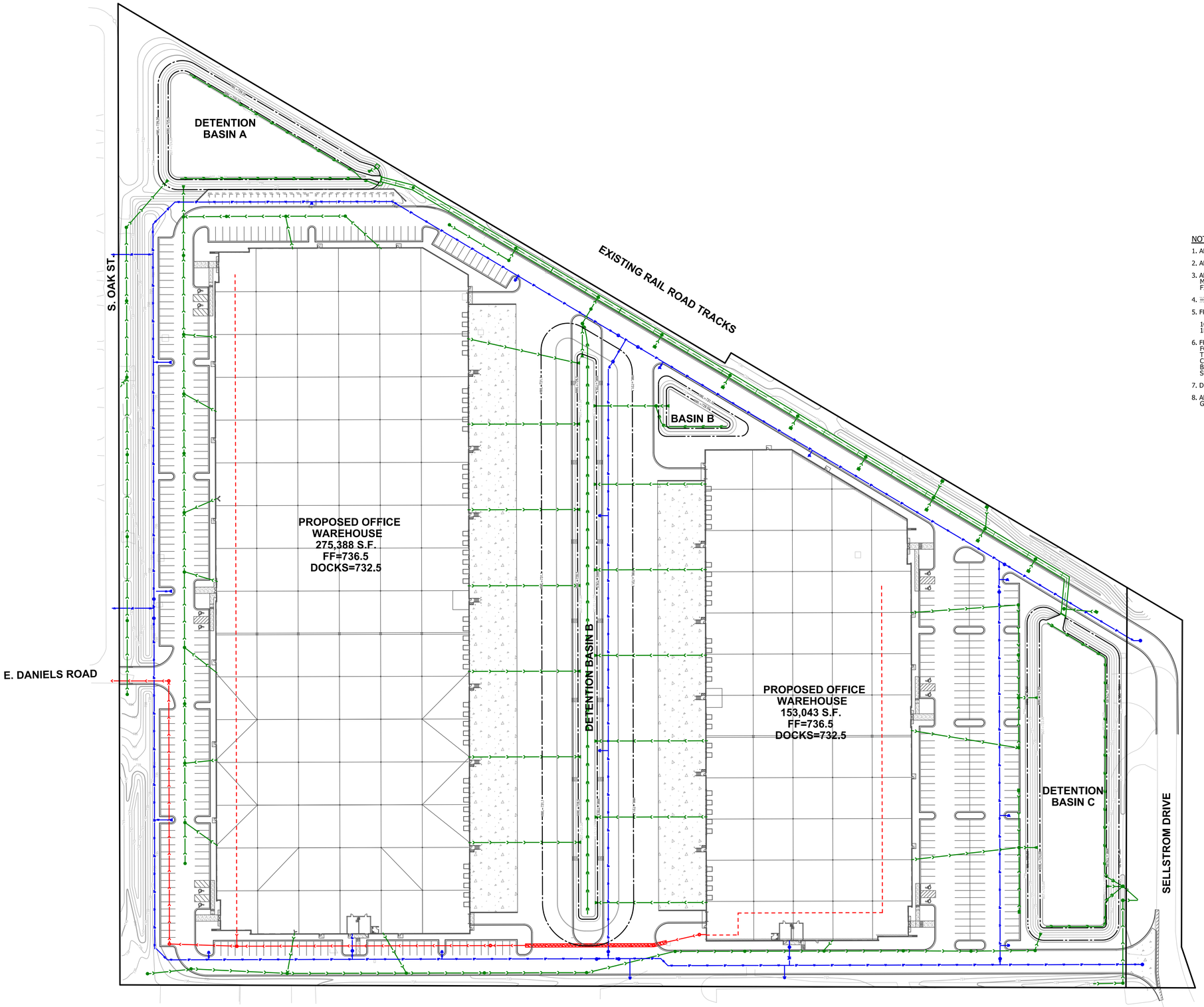


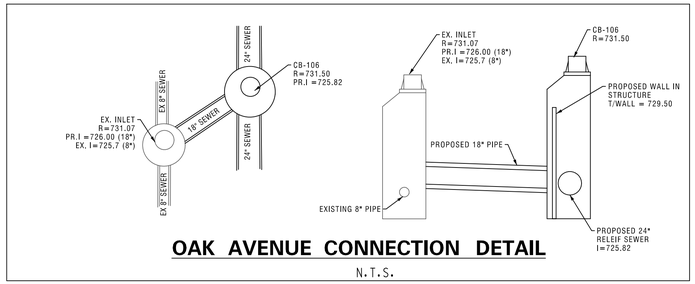
N

SCALE 1" = 60'

0 60 120

NOTES:

1. ALL STORM SEWERS SHALL BE RCP CL-IV UNLESS NOTED OTHERWISE.
2. ALL SANITARY SEWERS SHALL BE PVC SDR 35 UNLESS NOTED OTHERWISE.
3. ALL WATER MAINS SHALL BE D.I.P.-CLASS 52 UNLESS NOTED OTHERWISE. MEGALUGS AND THRUST BLOCKS ARE REQUIRED FOR ALL WATERMAIN FITTINGS.
4. ⟩⟩⟩



OAK AVENUE CONNECTION DETAIL

N.T.S.

STORM STRUCTURE LEGEND

STRUCTURE ABBREVIATION
STRUCTURE NUMBER
M-100
A4D,1P
FRAME AND LID TYPE
DIAMETER & SIZE OF STRUCTURE
TYPE OF STRUCTURE

STORM STRUCTURE ABBREVIATIONS

I = INLET
CB = CATCH BASIN
M = MANHOLE
E = FLARED END SECTION

SCALE 1" = 30'
0 30 60

NOTES:

1. ALL STORM SEWERS SHALL BE RCP CL-IV UNLESS NOTED OTHERWISE.
2. ALL SANITARY SEWERS SHALL BE PVC SDR 35 UNLESS NOTED OTHERWISE.
3. ALL WATER MAINS SHALL BE D.I.P.-CLASS 52 UNLESS NOTED OTHERWISE. MEGALUGS AND THRUST BLOCKS ARE REQUIRED FOR ALL WATERMAIN FITTINGS.
4. INDICATES TRENCH BACKFILL REQUIRED.
5. FRAME AND GRATE/LID FOR STORM SEWER STRUCTURES
   1C - MANHOLE-NEENAH R-1713 FRAME WITH TYPE "B" CLOSED LID
   1P - INLET, CATCH BASIN-NEENAH R-2504-D WITH TYPE "D" GRATE
   2P - INLET, NEENAH R-3281-A COMBO INL FRAME, GRATE, CURB BOX
   1G - INLET, CATCH BASIN-NEENAH R-4342 STOOL GRATE FOR GRASS AREAS
6. DESIGN OF WIRING AND CIRCUITRY OF LIGHTING WILL BE BY OTHERS.
7. ALL RESTRAINED WATER MAIN JOINTS SHALL BE U.S. PIPE "FIELD LOK" GASKET OR APPROVED EQUAL.
8. CONTRACTOR TO VERIFY LOCATION OF ALL EX. UTILITIES PRIOR TO CONSTRUCTION TO VERIFY ANY CONFLICTS. CONTRACTOR TO VERIFY BUILDING SERVICE LOCATION WITH ARCH. PLANS PREPARED BY OTHERS.
9. IF ANY PROPOSED SANITARY SEWER CROSSES ABOVE A WATERMAIN, SANITARY SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE OR WM QUALITY PVC (ASTM D-2241) AT LEAST TEN FEET (10') ON EACH SIDE OF CROSSING.
10. ALL PROPOSED STORM SEWER CROSSINGS OVER EXISTING OR PROPOSED WATERMAINS TO INSTALL CASING PIPE ON WATER MAIN FOR AT LEAST TEN FEET (10') ON BOTH SIDES OF WATERMAIN OR INSTALL GASKETED JOINTS PER SPECIFICATION C-443
11. CONTRACTOR TO VERIFY LOCATION OF ALL EX. UTILITIES PRIOR TO CONSTRUCTION TO VERIFY ANY CONFLICTS WITH THE EXISTING AND PR. WATERMAIN & SANITARY SEWERS. PIPE LOCATIONS WERE ESTIMATED FROM ORIGINAL DESIGN DRAWINGS AND THE FIELD SURVEY OBSERVATIONS AND IS MEANT AS A GUIDE ONLY. CONTRACTOR TO VERIFY BUILDING SERVICE LOCATION WITH ARCH. PLANS PREPARED BY OTHERS.
12. EXISTING & PROPOSED DRY UTILITIES ARE SHOWN FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION OF EXISTING DRY UTILITIES AND TO COORDINATE THE REMOVAL OR ABANDONMENT OF ALL DRY UTILITIES WITH THEIR CORRESPONDING OWNERS.

PROPOSED OFFICE WAREHOUSE BUILDING 1 FF=736.50 DOCKS = 732.50

PROPOSED OFFICE WAREHOUSE BUILDING 2 FF=736.50 DOCKS = 732.50

MATCH LINE - SEE SHEET UT2

MATCH LINE - SEE SHEET UT3

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

UTILITY PLAN - 1

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061UT01
DATE: 01/11/20
JOB NO. 11061
SHEET UT1
15 OF 30

N:\Projects\11061\ENG\11061UT01.dgn Default User=bmcgovern

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

MATCH LINE - SEE SHEET UT1

PROPOSED OFFICE WAREHOUSE BUILDING 1 FF=736.50 DOCKS = 732.50

PROPOSED OFFICE WAREHOUSE BUILDING 2 FF=736.50 DOCKS = 732.50

MATCH LINE - SEE SHEET UT3

SCALE 1" = 30'
0 30 60

NOTES:
SEE SHEET UT1 FOR NOTES AND LEGEND

NO.	DATE	REMARKS
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UTILITY PLAN - 2

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061UT02
DATE: 01/11/20
JOB NO. 11061
SHEET UT2
16 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

N:\Projects\11061\ENG\11061UT02.dgn Default User=bmcgovern

MATCH LINE - SEE SHEET UT2

MATCH LINE - SEE SHEET UT1

17 '-12" @ 2.97%

PROPOSED ROOF DRAIN I=726.30

CB-508 A4D,2P R=731.00 I=727.80 N I=724.70 E,W

CB-506 A5D,2P R=731.00 I=724.30

PROPOSED ROOF DRAIN I=731.50

CB-504 A5D,2P R=731.00 I=724.17

CB-800 A6D,1G R=727.00 I=722.70

B/STM=xxx.xx T/WM =xxx.xx

VV-11.8 * R=731.00

B/STM=728.10 T/WM =726.59

B/STM=728.52 T/WM =726.64

B/STM=728.53 T/WM =726.59

VV-12.8 * R=732.20

VV-11.8 * R=732.00

FH-12 GR=731.60

I-604 A2D,2P R=731.30 I=728.10

CB-602 A4D,2P R=731.30 I=727.39 W I=727.30 N,S I=724.15 E

FH-13 GR=731.60

I-706 A2D,2P R=731.30 I=728.10

CB-704 A4D,2P R=731.30 I=728.10

CB-702 A4D,2P R=731.30 I=727.45 S I=726.74 N I=724.15 E

CB-708 A2D,2P R=731.30 I=727.45

CB-710 A2D,2P R=731.30 I=728.10

FH-14 GR=732.65

I-418 A2D,1P R=731.30 I=728.10

I-412 A2D,1P R=731.50 I=728.30

I-414 A2D,1P R=731.30 I=728.10

I-416 A2D,1P R=731.30 I=728.10

I-415-A A2D,1P R=731.50 I=727.30

I-413-A A2D,1P R=731.50 I=728.30

I-420 A2D,1P R=731.50 I=728.50

MH-419 A4D,1C R=732.00 I=727.84 E I=727.01 N,S

MH-411 R=733.00 I=729.74 NE I=728.54 SW I=725.30 NW,SE

MH-413 R=733.00 I=728.04 NE I=727.84 SW I=724.20 NW,SE

MH-415 R=733.00 I=727.84 SW I=727.04 NE I=724.13 NW,SE

MH-417 R=733.00 I=727.84 SW I=726.04 NE I=724.07 NW,SE

100 L.F. CMP PIPE @ 0.10 % (SEE DETAIL ON SHEET D5)

13 '-12" @ 2.00%

26 '-12" @ 1.00%

75 L.F. CMP PIPE @ 0.10 % (SEE DETAIL ON SHEET D5)

80 L.F. CMP PIPE @ 0.10 % (SEE DETAIL ON SHEET D5)

ROUND ACCESS OPENING (SEE DETAIL ON SHEET D5)

63 '-12" @ 1.03%

54 '-12" @ 1.31%

81 '-12" @ 0.99%

72'-12" @ 1.11%

22 '-30" @ 0.23%

23 '-24" @ 0.65%

HWL=729.20

NWL=724.00

BOT=723.00

E-500 30"W/GRATE I=724.00

E-600 24"W/GRATE I=724.00

E-700 24"W/GRATE I=724.00

CLEANOUT (TYP.) I=733.00

CLEANOUT (TYP.) I=723.00

72" HEADWALL FOR CMP PIPE I=724.00

E-421

4" PERFORATED UNDERDRAIN

CB-502 A6D,2P R=730.50 I=724.05

EXISTING STRUCTURE TO REMAIN;PLUG AND BLOCK EASTERLY INVERT, CONNECT TO EXISTING MANHOLE R=728.68 (EX.) I=724.53 W (EX.) I=722.75 E (PR.)

36 '-30" @ 0.13%

104'-30" @ 0.13%

E-800 12"W/GRATE I=724.00

CLEANOUT (TYP.) I=722.65

CLEANOUT (TYP.) I=722.80

20 '-12" @ 1.00%

26 '-18" @ 0.27%

OUTLET CONTROL STRUCTURE OCS-1(SEE DETAIL ON SHEET D6 FOR RESTRICTOR DESIGN) A6D,1C R=731.20 I=723.20 W I=722.60 E I=722.60 (UD) 80,12"RCP

EXISTING STRUCTURE TO BE RECONSTRUCTED;PLUG AND BLOCK WESTERLY INVERT, CONNECT TO EXISTING MANHOLE R=727.08 (EX.) I=722.53 W (EX.) I=722.53 E (PR.)

PC-1 .8 * R=726.55

PC-2 .8 * R=733.20

NOTES:

SEE SHEET UT1 FOR NOTES AND LEGEND

SCALE 1" = 30'

0 30 60

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

UTILITY PLAN - 3

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061UT03

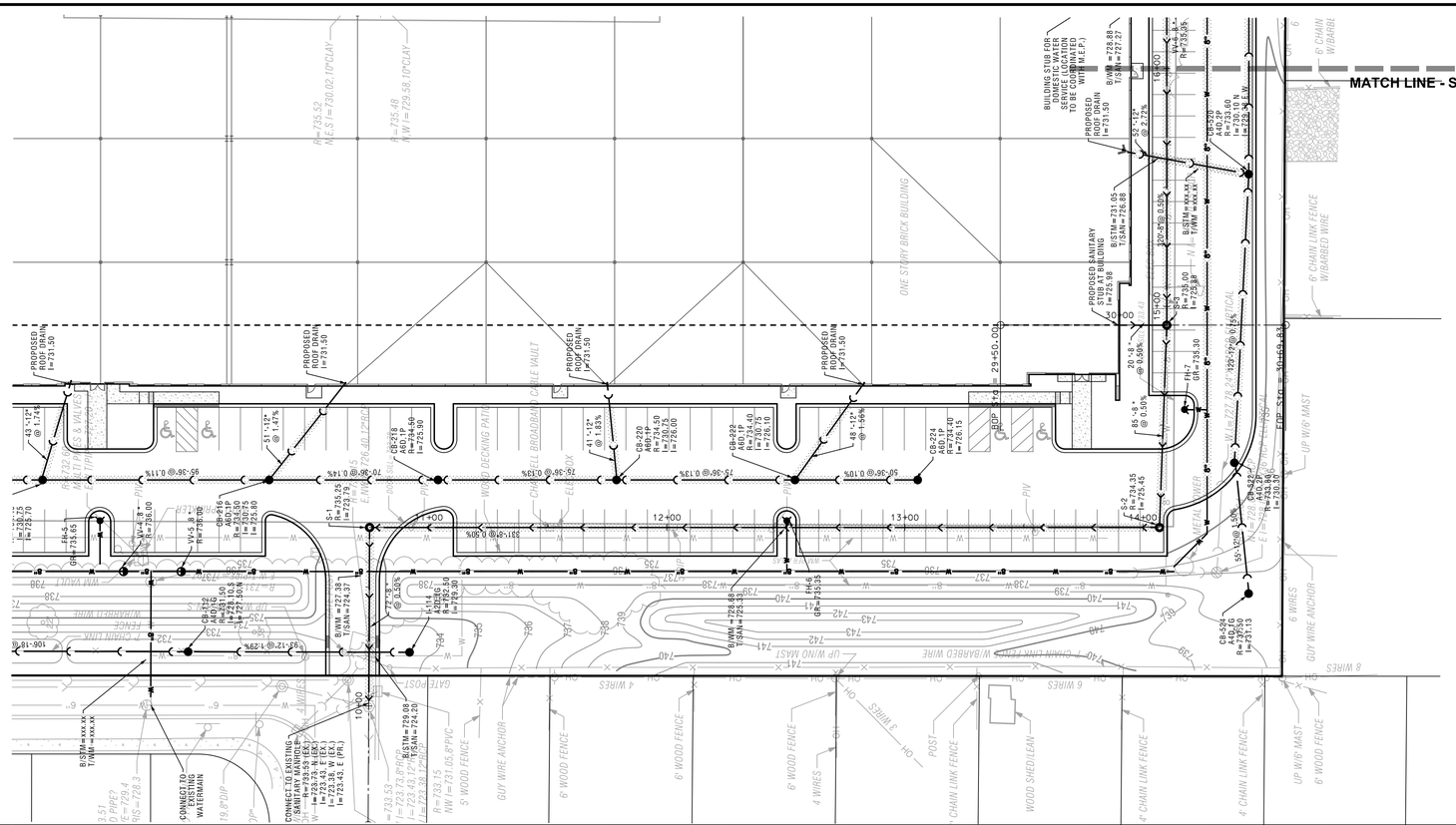
DATE: 01/11/20

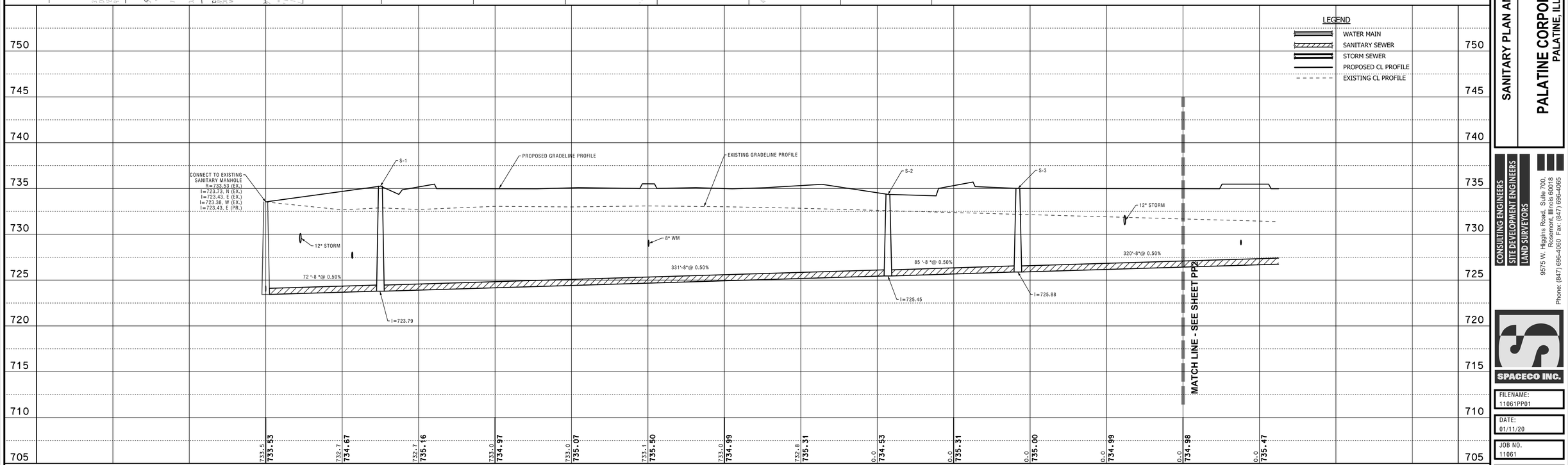
JOB NO. 11061

SHEET UT3
17 OF 30

N:\Projects\11061\ENG\11061UT03.dgn Default User=bmcgovern

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)





N
SCALE 1" = 30'
0 30 60

SCALE
1" = 30' HORIZ.
1" = 5' VERT.

NO.	DATE	REMARKS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

SANITARY PLAN AND PROFILE - 1

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

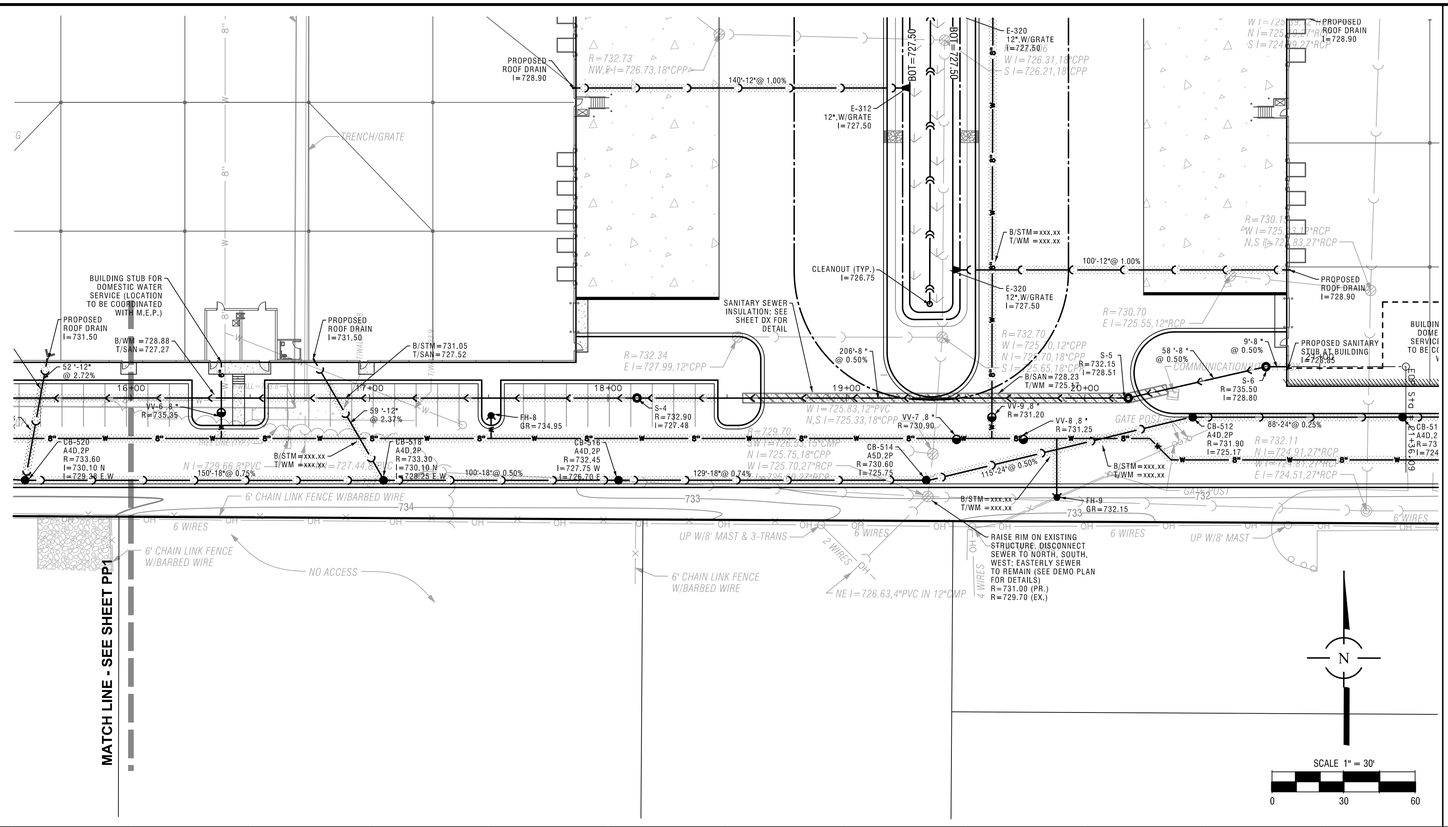
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

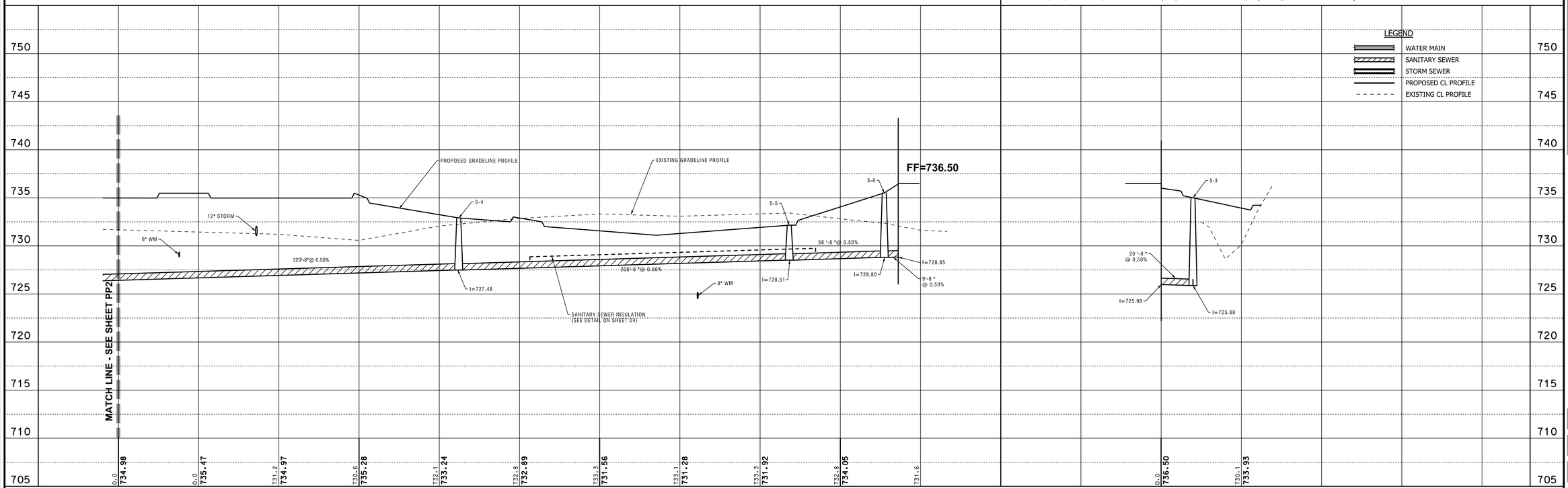
SPACECO INC.

FILENAME: 11061PP01
DATE: 01/11/20
JOB NO. 11061
SHEET PP1
18 OF 30

N:\Projects\11061\ENG\11061PP01.dgn Default User=bmcgovern

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)





NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

SANITARY PLAN AND PROFILE - 2

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061PP02

DATE: 01/11/20

JOB NO. 11061

SHEET **PP2**
19 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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This Soil Erosion & Sediment Control (SESC) Plan has been prepared to fulfill one of the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10____. The SESC Plan should be maintained on site as an integral component of the Storm Water Pollution Prevention Plan (SWPPP). The SWPPP, including the SESC Plan, should be amended whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the Waters of the State and which has not otherwise been addressed in the SWPPP. The SWPPP, shall also be amanded if it proves to be ineffective in eliminating or significantly minimizing pollutants, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction site activity. In addition, the SWPPP shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the SWPPP.

1. SITE DESCRIPTION

A. The following is a description of the nature of the construction activity: _____

_____

B. The following is a description of the intended sequence of construction activities which will disturb soils for major portions of the construction site:

Describe proposed construction sequence, sample follows:

1) Install perimeter sediment control measures
  a) Selective vegetation removal for silt fence installation
  b) Silt fence installation
  c) Construction fencing around areas not to be disturbed
  d) Stabilized construction entrance
2) Clear and grub (as necessary)
3) Construct sediment trapping devices (sediment traps, sediment basins, etc.)
4) Construct detention facilities and outlet control structure with restrictor & temporary perforated riser
5) Strip topsoil, stockpile topsoil and grade site
6) Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
7) Install storm sewer, sanitary sewer, watermain and associated inlet & outlet protection
8) Permanently stabilize detention basins with seed and erosion control blanket
9) Temporarily stabilize all areas including lots that have reached mass grade
10) Install roadways
11) Permanently stabilize all outlet areas
12) Install buildings and grade individual lots
13) Permanently stabilize lots
14) Remove all temporary soil erosion and sediment control measures after the site is stabilized with vegetation

C. The site has a total acreage of approximately____ acres. Construction activity will disturb approximately____ acres of the site.

D. 1) An estimated runoff coefficient of the site after construction activities are completed is____
  2) Existing data describing the soil or quality of any discharge from the site is included in

_____.

E. Refer to Sheets_____for a site plan indicating;
  1) drainage patterns;
  2) approximate slopes anticipated before and after major grading activities;
  3) locations where vehicles enter or exit the site and controls to minimize off-site sediment tracking;
  4) areas of soil disturbance;
  5) the location of major structural and nonstructural controls;
  6) the location of areas where stabilization practices are expected to occur;
  7) surface waters (including wetlands); and,
  8) locations where storm water is discharged to a surface water.

F. 1) The name of the receiving water(s) is(are):_____
  2) The name of the ultimate receiving water is:_____
  3) The extent of wetland acreage at the site is_____acres.

G. Potential sources of pollution associated with this construction activity may include:

- sediment from disturbed soils
- portable sanitary stations
- fuel tanks
- staging areas
- waste containers
- chemical storage areas
- oil or other petroleum products
- adhesives
- tar
- solvents
- detergents
- fertilizers
- raw materials (e.g., bagged portland cement)
- construction debris
- landscape waste
- concrete and concrete trucks
- litter

2. CONTROLS

This section of the SESC Plan addresses the various controls that should be implemented for each of the major construction activities described in the "Site Description" section. For each measure identified in the SWPPP, the contractor(s) or subcontractor(s) that will implement the measure should be identified. All contractors and subcontractors that are identified should be required to sign a copy of the certification statement from Part IV.F. of the ILR10 Permit (in accordance with Part VI.G. - Signatory Requirements, of the ILR10 Permit), All signed certification statements should be maintained in the SWPPP.

A. Approved State or Local Plans

The management practices, controls and other provisions contained in the SWPPP should be at least as protective as the requirements contained in the Illinois Environmental Protection Agency's (IEPA) and the United States Department of Agriculture's Natural Resource Conservation Service Illinois Urban Manual, 2012. Requirements specified in sediment and erosion control site plans or site permits or storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of a Notice of Intent (NOI) to be authorized to discharge under the ILR10 permit, incorporated by reference and are enforceable under the ILR10 permit even if they are not specifically included in a SWPPP required under the ILR10 permit. This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit that is issued for the construction site.

The soil erosion and sediment control measures for this site should meet the requirements of the following agencies:

- Municipality (be specific)
- County Agency and/or SWCD (be specific)
- IEPA
- U.S. Army Corps of Engineers

B. Control Implementation Schedule

Best Management Practices will be implemented on an as-needed basis to protect water quality. Perimeter controls of the site should be installed prior to soil disturbance (excluding soil disturbance necessary to install the controls), including demolition activities. Perimeter controls, including the silt fence, should be actively maintained until final stabilization of those portions of the site upward of the perimeter control. Stabilized construction entrance(s) and sediment traps should be installed as described in the Intended sequence of construction activities. The contractor is responsible for the adequate protection (including sediment control) of existing sewers and sewer structures during construction operations. As necessary, the appropriate sediment control measure should be installed prior to land disturbing activities.

Stabilization measures should be initiated where construction activities have temporarily or permanently ceased, in accordance with Local and State requirements, as described below. Once construction activity in an area has permanently ceased, that area should be permanently stabilized. Temporary perimeter controls should be removed after final stabilization of those portions of the site upward of the perimeter control.

C. Erosion and Sediment Controls

The appropriate soil erosion and sediment controls should be implemented on site and should be modified to reflect the current phase of construction. All temporary sediment and erosion control measures should be repaired or replaced as soon as practicable to maintain NPDES compliance. Permittee or an authorized agent is responsible for inspecting all sediment and erosion control measures at a minimum of every 7 calendar days and within 24 hours, or one working day, of the end of a 0.5-inch (or greater) rain event.

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices should be installed to the Standard Practice. The contractor is responsible for the installation of any additional erosion and sediment control measures necessary to minimize erosion and sedimentation as determined by the Engineer or Primary Contact.

1) Stabilization Practices - Areas that will not be paved or covered with non-erosive material should be stabilized using procedures in substantial conformance with the Illinois Urban Manual. This SESC Plan Includes site-specific soil erosion and sediment control measures. Additional erosion controls should be implemented as necessary, as determined by the Engineer or Primary Contact.

The following temporary and permanent stabilization practices, at a minimum, are proposed:

- permanent seeding
- temporary seeding
- erosion control blanket
- other measures

Site-specific scheduling of the implementation of these practices is included in the Soil Protection Chart. A record of the dates when major grading activities occur, when construction activities cease on a portion of the site, and when stabilization measures are initiated should be included in the SWPPP.

Stabilization of disturbed areas must be initiated within 1 working day of permanent or temporary cessation of earth activities and shall be completed as soon as possible but not later than 14 days from the initialization of stabilization work in an area. Exceptions to these time frames are specified below.

  a. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.

  b. On areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method can be used. Temporary stabilization techniques and materials shall conform to the SWPPP.

2) Structural Practices - Provided below is a description of structural practices that should be implemented, to the degree attainable to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Structural practices should be placed on upland soils to the degree practicable. The installation of the following devices may be subject to Section 404 of the Clean Water Act:

- stabilized construction entrance
- silt fence
- sediment traps (provide locations and dimensions in plan set)
- other measures

D. Storm Water Management

Provided below is a description of measures that will be installed during the construction process to control the pollutants in storm water discharges that will occur after the construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1) The practices selected for implementation were determined on the basis of technical guidance contained in IEPA's Illinois Urban Manual, Federal, State, and/or Local Requirements. The storm water management measures include:

- detention basins (wet basins, dry basins, etc.)
- retention basins
- vegetated swales
- infiltration trenches
- other measures

2) Velocity dissipation devices, such as rip-rap aprons at flared end sections or level spreaders, shall be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a watercourse so that the natural, physical, and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

E. Waste Management

Solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed of off site by the contractor. The contractor is responsible to acquire the permit required for such disposal. Burning on site will not be permitted. No solid materials, including building materials, shall be discharged to Waters of the State, except as authorized by a Section 404 permit. All waste materials should be collected and stored in approved receptacles. No wastes should be placed in any location other than in the approved containers appropriate for the materials being discarded. There should be no liquid wastes deposited into dumpsters or other containers which may leak. Receptacles with deficiencies should be replaced as soon as possible and the appropriate clean-up procedure should take place, if necessary. Construction waste material is not to be buried on site. Waste disposal should comply with all Local, State, and Federal regulations.

On-site hazardous material storage should be minimized and stored in labeled, separate receptacles from non-hazardous waste. All hazardous waste should be disposed of in the manner specified by Local or State regulation or by the manufacturer.

F. Concrete Waste Management

Concrete waste or washout should not be allowed in the street or allowed to reach a storm water drainage system or watercourse. When practicable, a slip should be posted at each location to identify the washout. To the extent practicable, concrete washout areas should be located a reasonable distance from a storm water drainage inlet or watercourse, and should be located at least 10 feet behind the curb. If the washout area is adjacent to a paved road. A stabilized entrance that meets Illinois Urban Manual standards should be installed at each washout area.

The containment facilities should be of sufficient volume to completely contain all liquid and concrete waste materials including enough capacity for anticipated levels of rainwater. The dried concrete waste material should be picked up and disposed of properly when 66% capacity is reached. Hardened concrete can be properly recycled and used again on site (as approved by the Engineer) or hauled off site to an appropriate landfill.

G. Concrete Cutting

Concrete waste management should be implemented to contain and dispose of saw-cutting slurries. Concrete cutting should not take place during or immediately after a rainfall event. Waste generated from

concrete cutting should be cleaned-up and disposed into the concrete washout facility as described above.

H. Vehicle Storage and Maintenance

When not in use, construction vehicles should be stored in a designated area(s) outside of the regulatory floodplain, away from any natural or created watercourse, pond, drainage-way or storm drain. Controls should be installed to minimize the potential of runoff from the storage area(s) from reaching storm drains or water courses. Vehicle maintenance (including both routine maintenance as well as on-site repairs) should be made within a designated area(s) to prevent the migration of mechanical fluids (oil, antifreeze, etc.) into watercourses, wetlands or storm drains. Drip pans or absorbent pads should be used for all vehicle and equipment maintenance activities that involve grease, oil, solvents, or other vehicle fluids. Construction vehicles should be inspected frequently to identify any leaks; leaks should be repaired immediately or the vehicle should be removed from site. Dispose of all used oil, antifreeze, solvents and other vehicle-related chemicals in accordance with United States Environmental Protection Agency (USEPA) and IEPA regulations and per Material Safety Data Sheet (MSDS) and/or manufacturer Instructions. Contractors should immediately report spills to the Primary Contact.

I. Material Storage and Good Housekeeping

Materials and/or contaminants should be stored in a manner that minimizes the potential to discharge into storm drains or watercourses. An on-site area should be designated for material delivery and storage. All materials kept on site should be stored in their original containers with legible labels, and if possible, under a roof or other enclosure. Labels should be replaced if damaged or difficult to read. Bermed-off storage areas are an acceptable control measure to prevent contamination of storm water. MSDS should be available for referencing clean-up procedures. Any release of chemicals/contaminants should be immediately cleaned up and disposed of properly. Contractors should immediately report all spills to the Primary Contact, who should notify the appropriate agencies, if needed.

To reduce the risks associated with hazardous materials on site, hazardous products should be kept in original containers unless they are not re-sealable. The original labels and MSDS should be retained on site at all times. Hazardous materials and all other material on site should be stored in accordance with manufacturer or MSDS specifications. When disposing of hazardous materials, follow manufacturer or Local and State recommended methods.

The following good housekeeping practices should be followed on site during the construction project:

- An effort should be made to store only enough product required to do the job.

- All materials stored on site should be stored in a neat, orderly manner in their appropriate containers and adequately protected from the environment.

- Products should be kept in their original containers with the original manufacturer's label.

- Substances should not be mixed with one another unless recommended by the manufacturer.

- Operations should be observed as necessary to ensure proper use and disposal of materials on site.

- Whenever possible, all of a product should be used up before disposing of the container.

- Manufacturer's recommendations for proper use and disposal should be followed.

J. Management of Portable Sanitary Stations

To the extent practicable, portable sanitary stations should be located in an area that does not drain to any protected natural areas, Waters of the State, or storm water structures and should be anchored to the ground to prevent from tipping over. Portable sanitary stations located on impervious surfaces should be placed on top of a secondary containment device, or be surrounded by a control device (e.g., gravel-bag berm). The contractor should not create or allow unsanitary conditions. Sanitary waste should be disposed of in accordance with applicable State and/or Local regulations.

K. Spill Prevention and Clean-Up Procedures

Manufacturer's recommended methods for spill clean-up should be available and site personnel should be made aware of the procedures and the location of the information and clean-up supplies. Materials and equipment necessary for spill clean-up should be kept in the material storage area on site. Equipment and materials should include, but are not limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic and/or metal trash containers specifically for this purpose. Discharges of a hazardous substance or oil caused by a spill (e.g., a spill of oil into a separate storm sewer or Waters of the State) are not authorized by the ILR10 permit. If a spill occurs, notify the Primary Contact immediately. The construction site should have the capacity to control, contain, and remove spills. If they occur. Spills should be cleaned up immediately (after discovery) in accordance with MSDS and should not be buried on site or washed into storm sewer drainage inlets, drainage-ways, or Waters of the State.

Spills in excess of Federal Reportable Quantities (as established under 40 CFR Parts 110, 117, or 302), should be reported to the National Response Center by calling (800) 424-8802. MSDS often include information on Federal Reportable Quantities for materials. Spills of toxic or hazardous materials should be reported to the appropriate State or Local government agency, as required. When cleaning up a spill, the area should be kept well ventilated and appropriate personal protective equipment should be used to minimize injury from contact with a hazardous substance.

In addition to the good housekeeping and other management practices discussed in the previous sections of these Notes, the following minimum practices should be followed to reduce the risk of spills:

- On-site vehicles should be monitored for leaks and should receive regular preventative maintenance to reduce the chance of leakage.

- Petroleum products should be stored in tightly sealed and clearly labeled containers.

- Contractors should follow the manufacturer's recommendations for proper use, storage, and disposal of materials. Excess materials should be disposed of according to the manufacturer's instructions or State and Local regulations, and should not be discharged to the storm sewer or waterbody.

L. De-Watering Operations

During de-watering/pumping operations, only uncontaminated water should be allowed to discharge to protected natural areas, Waters of the State, or to a storm sewer system (in accordance with Local permits). Inlet hoses should be placed in a stabilized sump pit or floated at the surface of the water in order to limit the amount of sediment intake. Pumping operations may be discharged to a stabilized area that consists of an energy dissipating device (e.g., stone), sediment filter bag, or both. Adequate erosion controls should be used during de-watering operations as necessary. Stabilized conveyance channels should be installed to direct water to the desired location as applicable. Additional control measures may be installed at the outlet area at the discretion of the Primary Contact or Engineer.

M. Off-Site Vehicle Tracking

The site should have one or more stabilized construction entrances in conformance with the Plan details. Stabilized construction entrance(s) should be installed to help reduce vehicle tracking of sediments. Streets should be swept as needed to reduce excess sediment, dirt, or stone tracked from the site. Maintenance may include top dressing the stabilized entrance with additional stone and removing top layers of stone and sediment, as needed. Vehicles hauling erodible material to and from the construction site should be covered with a tarp.

N. Topsoil Stockpile Management

If topsoil is to be stockpiled at the site, select a location so that it will not erode, block drainage, or interfere with work on site. Topsoil stockpiles should not be located in the 100-year floodplain or designated buffer protecting Waters of the State. During construction of the project, soil stockpiles should be stabilized or protected with sediment trapping measures. Perimeter controls, such as silt fence, should be placed around the stockpile immediately. Stabilization of the stockpile should be completed if the stockpile is to remain undisturbed for longer than fourteen days.

O. Dust Control

Dust control should be implemented on site as necessary. Repetitive treatment should be applied as needed to accomplish control when temporary dust control measures are used. A water truck should be present on site (or available) for sprinkling/irrigation to limit the amount of dust leaving the site. Watering should be applied daily (or more frequently) to be effective. Caution should be used not to overwater, as that may cause erosion.

If field observations indicate that additional protection from wind erosion (in addition to, or in place of watering) is necessary, alternative dust suppressant controls should be implemented at the discretion and approval of the Engineer and/or Primary Contact.

Street cleaning should also be used as necessary to control dust. Paved areas that have soil on them from the construction site should be cleaned as needed, utilizing a street sweeper or bucket-type endloader or scraper at the direction of the Engineer and/or Primary Contact.

3. MAINTENANCE

Maintenance of the controls Incorporated into this project should be performed as needed to assure their continued effectiveness. This includes prompt and effective repair and/or replacement of deficient control measures. The following is a description of procedures that should be used to maintain, In good and effective operating condition, erosion and sediment control measures and other protective measures Identified in the SESC Plan and Standard Specifications.

Dust control: When temporary dust control measures are used, repetitive treatment should be applied as needed to accomplish control.

Sediment filter bags: Sediment filter bags should be installed on pump outlet hoses that discharge off site or to sensitive on-site areas, and should be placed in an area that allows for the bag to be removed without producing a sediment discharge. The bags should be inspected frequently and repaired or replaced as needed.

Silt fence: Silt fences should be inspected regularly for undercutting where the fence meets the ground, overtopping, and tears along the length of the fence. Deficiencies should be repaired immediately. Remove accumulated sediments from the fence base when the sediment reaches one-half the fence height. During final stabilization, properly dispose of any sediment that has accumulated on the silt fence. Alternative sediment control measures should be considered for areas where silt fence continually fails.

Stabilized construction entrance: The stabilized construction entrances should be maintained to prevent tracking of sediment onto public streets. Maintenance includes top dressing with additional stone and removing top layers of stone and sediment. The sediment tracked onto the public right-of-way should be removed immediately.

Temporary sediment traps: Temporary sediment traps should be inspected after each period of significant rainfall. Remove sediment and restore the trap to its original dimensions when the sediment has accumulated to one-half the design depth of the permanent pool. Place the sediment that is removed in a designated disposal area. Check the structure for damage from erosion or piping. After all sediment-producing areas have been permanently stabilized, remove the structure and all unstable sediment. Grade the area to blend with the adjoining areas and stabilize properly.

4. INSPECTIONS

The Permittee (or their authorized representative) will be responsible for conducting site inspections in compliance with the ILR10 NPDES Permit. After each inspection, a report should be prepared by the qualified personnel who performed the inspection. The inspection report should be maintained on site as part of the SWPPP.

Inspections should be conducted at least once every seven calendar days and within 24 hours or by the end of the following work day, of the end of a storm event that is 0.5 inches or greater, or equivalent snowfall.

Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly Inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

Each inspection should include the following components:

A. Disturbed areas and areas used for the storage of materials that are exposed to precipitation should be inspected for evidence of, or the potential for, pollutants entering the drainage system. The erosion and sediment control measures identified in the SWPPP should be observed to ensure that they have been installed and are operating correctly. Where discharge points are accessible, they should be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site should be inspected for off-site sediment tracking. All pumping operations and other potential non-storm water discharge sources should also be inspected.

B. Based on the results of the Inspection, the description of potential pollutant sources Identified, and the pollution prevention measures described in the SWPPP should be revised, as appropriate, as soon as practicable after the inspection. The modifications, if any, shall provide for timely implementation of any changes to the SWPPP within 7 calendar days following the inspection.

C. A report summarizing the scope of the Inspection, name(s) and qualifications of personnel making the Inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance with paragraph B, above should be made and retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. The report shall be signed in accordance with Part VI.G. (Signatory Requirements) of the ILR10 NPDES Permit.

D. The Permittee shall notify the appropriate agency field operations section office by e-mail at: epa.swnoncompli@illinois.gov , telephone or fax within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any Inspection conducted or for violation of any condition of this permit. The Permittee should complete and submit within 5 days an "Incidence of Non-Compliance" (ION) report for any violation of the SWPPP observed during an inspection conducted. Including those not required by the SWPPP. Submission should be on forms provided by IEPA and Include specific Information on the cause of non-compliance, actions which were taken to prevent any further causes of non-compliance, and a statement detailing any environmental impact, which may have resulted from the non-compliance.

E. All reports of non-compliance shall be signed by a responsible authority as defined in Part VI.G. (Signatory Requirements), of the ILR10 NPDES Permit,

F. After the initial contact has been made within the appropriate agency field operations section office, all reports of non-compliance shall be mailed to IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

5. NON-STORM WATER DISCHARGES

Except for flows from fire fighting activities, possible sources of non-storm water that may be combined with storm water discharges associated with the proposed activity, are described below:

- Fire fighting activities
- Fire hydrant flushings
- Water used to wash vehicles where detergents are not used
- Water used to control dust
- Potable water sources including uncontaminated waterline flushings
- Landscape irrigation drainages
- Routine external building washdown which does not use detergents
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed) and where detergents have not been used.
- Uncontaminated air conditioning condensate
- Springs
- Irrigation ditches
- Uncontaminated ground water
- Foundation or footing drains where flows are not contaminated with process materials such as solvents

6. PROHIBITED NON-STORMWATER DISCHARGES

- Concrete and wastewater from washout of concrete (unless managed by an appropriate control)
- Drywall compound
- Wastewater from washout and cleanout of stucco, paint
- Form release oils
- Curing compounds and other construction materials
- Fuels, oils, or other pollutants used in vehicle or equipment operation and maintenance
- Soaps, solvents, or detergents
- Toxic or hazardous substances from a spill or other release
- Any other pollutant that could cause or tend to cause water pollution

Pollution prevention measures should be implemented for non-storm water components of the discharge.

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A									
DORMANT SEEDING	B										B	
TEMPORARY SEEDING			C				D					
SODDING			E**									
MULCHING	F											

A KENTUCKY BLUEGRASS 90 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE.

B KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE + STRAW MULCH 2 TONS/ACRE.

C SPRING OATS 100 LBS/ACRE

D WHEAT OR CEREAL RYE 150 LBS/ACRE.

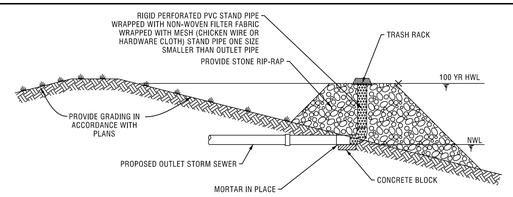
E SOD

F STRAW MULCH 2 TONS/ACRE.

* IRRIGATION NEEDED DURING JUNE AND JULY.

** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.

SOIL PROTECTION CHART



PLAN CODE: (PR)

PERFORATED RISER DETAIL
NOT TO SCALE

1. THE PERFORATED RISER SHALL BE PROVIDED AS PART OF THE SEDIMENT AND EROSION CONTROL MEASURES DURING CONSTRUCTION AND IN CONJUCTION WITH THE CONSTRUCTION OF THE DETENTION BASIN.
2. WHEN THE DETENTION BASIN AND UPSTREAM TRIBUTARY DRAINAGE AREAS ARE REVEGETATED, AND WHEN DIRECTED BY THE ENGINEER, THE PERFORATED RISER SHALL BE REMOVED AND THE BASIN OUTFALL STRUCTURES SHALL BE CONSTRUCTED AND THE GRADING RESTORED IN ACCORDANCE WITH THE PLANS.

CONTRACTOR CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR10) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

PROJECT:_____

PERMIT #: ILR10_____

_____ _____
DATE

_____ _____
CONTRACTOR SIGNATURE TELEPHONE NUMBER

_____
PRINTED NAME & TITLE

_____
NAME OF CONTRACTING FIRM

_____
STREET ADDRESS

_____
CITY, STATE, ZIP CODE

TRADE/ RESPONSIBILITIES:_____

NOTE:
ALL CONTRACTORS PERFORMING WORK ON THIS SITE ARE REQUIRED TO SIGN A CONTRACTOR CERTIFICATION STATEMENT AS ILLUSTRATED ABOVE. THE SIGNED STATEMENTS WILL BE MAINTAINED ON THE SITE WITH THE SWPPP.

OWNER SWPPP CERTIFICATION

PROJECT:_____

PERMIT #: ILR10_____

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

_____ _____
SIGNATURE OF OWNER DATE

_____
PRINTED NAME OF OWNER

NOTE:
THE CERTIFICATION ILLUSTRATED ABOVE SHALL BE SIGNED BY THE OWNER LISTED ON THE NOTICE OF INTENT IN ACCORDANCE WITH PART VI.G. OF THE ILR10 NPDES PERMIT. THE SIGNED STATEMENT SHALL BE MAINTAINED ON THE SITE WITH THE SWPPP.

OUTFALL NAME OR NUMBER	INLET PIPE SIZE d (IN)	VELOCITY (F/S)	LENGTH OF APRON L (FT)	RIPRAP GRADATION	WIDTH OF APRON U/S FACE 3d (FT)	WIDTH OF APRON D/S FACE 3d+L (FT)	DEPTH OF RIPRAP Y (IN)

NO.	DATE	REMARKS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

SOIL EROSION AND SEDIMENT CONTROL PLAN

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061-SESC01

DATE: 01/11/20

JOB NO. 11061

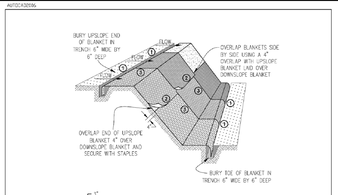
SHEET SE1
20 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

N:\Projects\11061\ENG\11061SESC01.dgn Default User=bmcgovern

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & L. S. Sellstrom Dr. - FPD, PFS, RZ)

EROSION CONTROL BLANKET INSTALLATION DETAILS

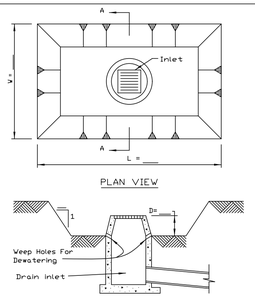


NOTES:

1. Staples shall be placed in a diamond pattern at 2 per s.y. for stitched blankets. Non-stitched shall use 4 staples per s.y. of material. This equates to 200 staples with stitched blanket and 400 staples with non-stitched blanket per 100 s.y. of material.
2. Staple or push pin lengths shall be selected based on soil type and conditions. (minimum staple length is 6")
3. Erosion control material shall be placed in contact with the soil over a prepared seedbed.
4. All anchor slots shall be stapled at approximately 12" intervals.

PLAN CODE: EB

INLET PROTECTION - EXCAVATED DRAIN PLAN

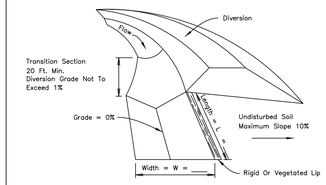


NOTES:

1. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
2. The sediment trap shall be removed and the area stabilized when the constructed drainage area has been properly stabilized.
3. All cut slopes shall be 2:1 or flatter.

PLAN CODE: IP

LEVEL SPREADER

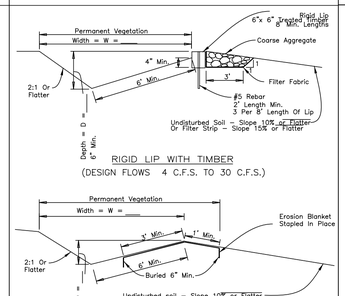


NOTES:

1. Ends of spreader shall be tied into higher ground to prevent flow around the level spreader.
2. See plans for L and W dimensions.

PLAN CODE: LS

LEVEL SPREADER

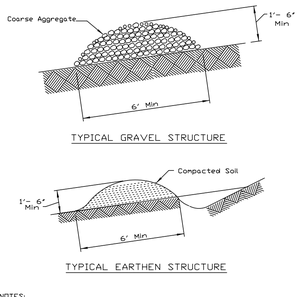


NOTES:

1. Coarse aggregate shall meet one of the following IDOT gradations: CA-1, or CA-3.
2. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, type fabric shall be Class I.
3. See sheet entitled STABILIZATIONS IL-535 for filter strip requirements.
4. See sheet entitled EROSION BLANKET IL-530 for blanket material and installation requirements.
5. See plans for permanent seeding requirements.
6. See plans for D and W dimensions.

PLAN CODE: LS

RIGHT OF WAY DIVERSION PLAN

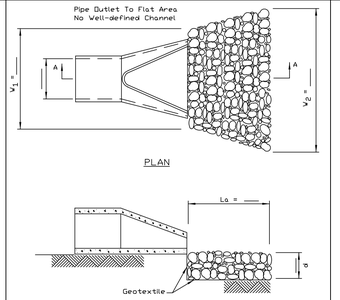


NOTES:

1. Install the diversion as soon as right-of-way has been cleared and graded.
2. Disc the base for the constructed ridge before placing fill.
3. Track the ridge to compact it to the design cross section.
4. Locate the outlet on an undisturbed area. Adjust field spacing of the diversion to use the most stable outlet areas. When natural areas are not deemed satisfactory, provide outlet protection.
5. Immediately seed and mulch the portions of the diversions not subject to construction traffic. Stabilize with gravel areas to be crossed by vehicles.
6. Coarse aggregate, if used, shall meet one of the following IDOT gradations: CA-1,CA-2 CA-3, OR CA-4.

PLAN CODE: RD

PIPE OUTLET TO FLAT AREA

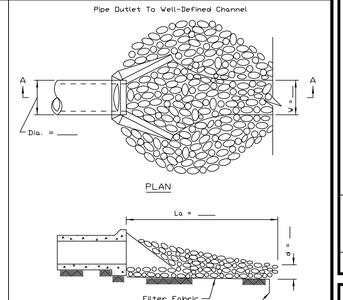


NOTES:

1. The filter fabric shall meet the requirements in material specifications 592 GEOTEXTILE Table 1 or 2, class I, II or III.
2. The rock riprap shall meet the IDOT requirements for the following gradation: RR _____, Quality _____.
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

PLAN CODE: LA

PIPE OUTLET TO CHANNEL

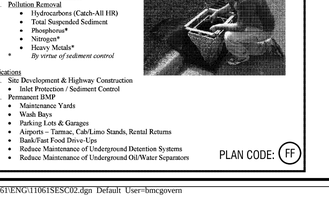


NOTES:

1. The filter fabric shall meet the requirements in material specification 592 GEOTEXTILE Table 1 or 2, Class I, II or III.
2. The rock riprap shall meet the IDOT requirements for the following gradation: _____.
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

PLAN CODE: LA

STABILIZED CONSTRUCTION ENTRANCE PLAN

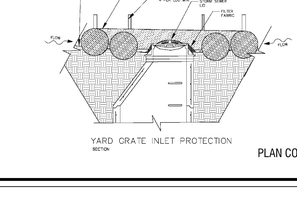


NOTES:

1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

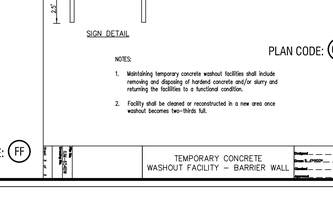
PLAN CODE: SE

STABILIZED CONSTRUCTION ENTRANCE PLAN



PLAN CODE: SE

SUMP PIT PLAN

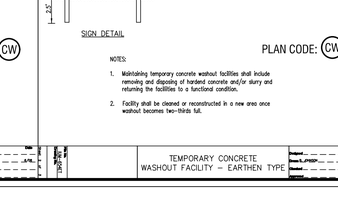


NOTES:

1. Pit dimensions are optional.
2. The standpipe will be constructed by perforating a 12"-24" diameter corrugated metal or PVC pipe.
3. A base of 2" aggregate will be placed in the pit to a minimum depth of 12". After installing the standpipe, the pit surrounding the standpipe will then be backfilled with 2" aggregate.
4. The standpipe will extend 12" to 18" above the lip of the pit.
5. If discharge will be pumped directly to a storm drainage system, the standpipe will be wrapped with filter fabric before installation.
6. If desired, 1/4"-1/2" hardware cloth may be placed around the standpipe prior to attaching the filter fabric. This will increase the rate of water seepage into the pipe.

PLAN CODE: SP

TEMPORARY SEDIMENT TRAP

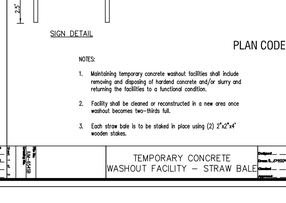


NOTES:

1. If the sediment pool is formed or enlarged the side slope will be 2:1 or flatter.
2. The fill shall be constructed using IDOT RR-4 stone size. A 1'layer of IDOT CA-2 should be placed on the inside face to reduce the flow rate.
3. The rock will be placed according to construction specification 25 ROCKFILL. Placement will be by Method 1 and compaction will be class III.
4. The geotextile shall meet the requirements in material specification 592 GEOTEXTILE table 1 or 2, class I, II or IV.

PLAN CODE: ST

SILT FENCE PLAN SPACECO, INC. PRIMARY DETAIL



NOTES:

1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 40 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

PLAN CODE: XX

SILT FENCE WITH WIRE SUPPORT PLAN SPACECO, INC. ALTERNATE DETAIL

NOTES:

1. Silt Fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization. Silt fence shall be placed on the flattest area available.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 40 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

PLAN CODE: XX

TREE PROTECTION - FENCING

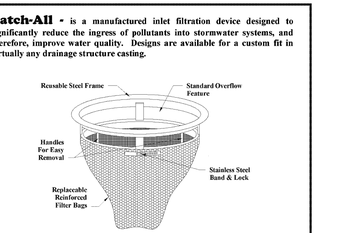
NOTES:

1. The fence shall be located a minimum of 1 foot outside the drip line of the tree to be saved and in no case closer than 5 feet to the trunk of any tree.
2. Fence posts shall be either standard steel posts or wood posts with a minimum cross sectional area of 3.0 sq. in.
3. The fence may be either 40" high snow fence, 40" plastic web fencing or any other material as approved by the engineer/inspector.

PLAN CODE: TP

Catch-All

Catch-All - is a manufactured inlet filtration device designed to significantly reduce the ingress of pollutants into stormwater systems, and therefore, improve water quality. Designs are available for a custom fit in virtually any drainage structure casting.



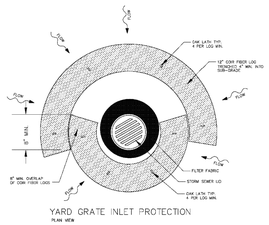
Catch-All HR is available to provide the added benefit of hydrocarbon removal.

Design Benefits

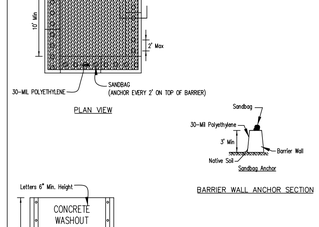
1. Pollution Prevention
   - Sediment Control
2. Pollution Removal
   - Hydrocarbons (Catch-All HR)
   - Total Suspended Sediment
   - Phosphorus*
   - Nitrogen*
   - Heavy Metals*
   - *By virtue of sediment control*

Applications

1. Site Development & Highway Construction
   - Inlet Protection / Sediment Control
2. Permanent BMP
   - Maintenance Yards
   - Wash Bays
   - Parking Lots & Garages
   - Airports – Tarmac, Cab/Limo Stands, Rental Returns
   - Bank/Fast Food Drive-Ups
   - Reduce Maintenance of Underground Detention Systems
   - Reduce Maintenance of Underground Oil/Water Separators



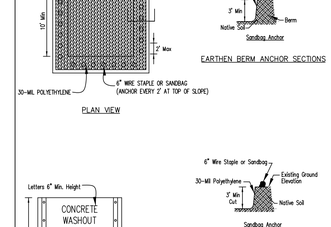
PLAN CODE: FF



NOTES:

1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardend concrete and/or slurry and returning the facilities to a functional condition.
2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.

PLAN CODE: CW



NOTES:

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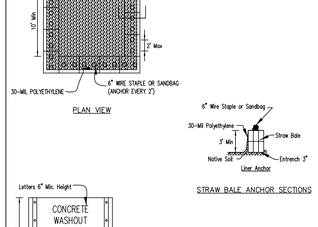
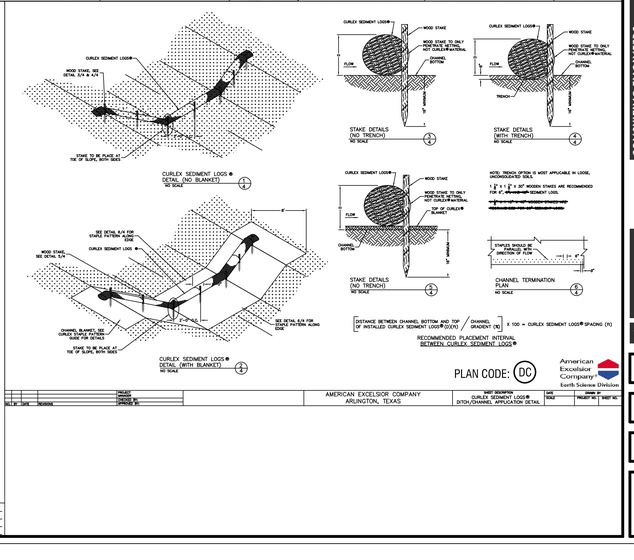


NOTES:

1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardend concrete and/or slurry and returning the facilities to a functional condition.
2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.
3. Each straw bale is to be staked in place using (2) 2"x2"x4' wooden stakes.

PLAN CODE: CW



PLAN CODE: DC

American Excelsior Company
Earth Saver Division

PROJECT	AMERICAN EXCELSIOR COMPANY ARLINGTON, TEXAS	SHEET DESCRIPTION	CURLEX® SEDIMENT LOGS® DITCH/CHANNEL APPLICATION DETAIL	DATE	SHEET NO.
DESIGNED BY				SCALE	PROJECT NO.
DRAWN BY					SHEET NO.
CHECKED BY					

REVISIONS			
NO.	DATE	REMARKS	
1	01/22/20	ISSUE FOR PERMIT	

SOIL EROSION AND SEDIMENT CONTROL PLAN

PALATINE CORPORATE CENTER

PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061-SESC02

DATE: 01/11/20

JOB NO. 11061

SHEET SE2

21 OF 30

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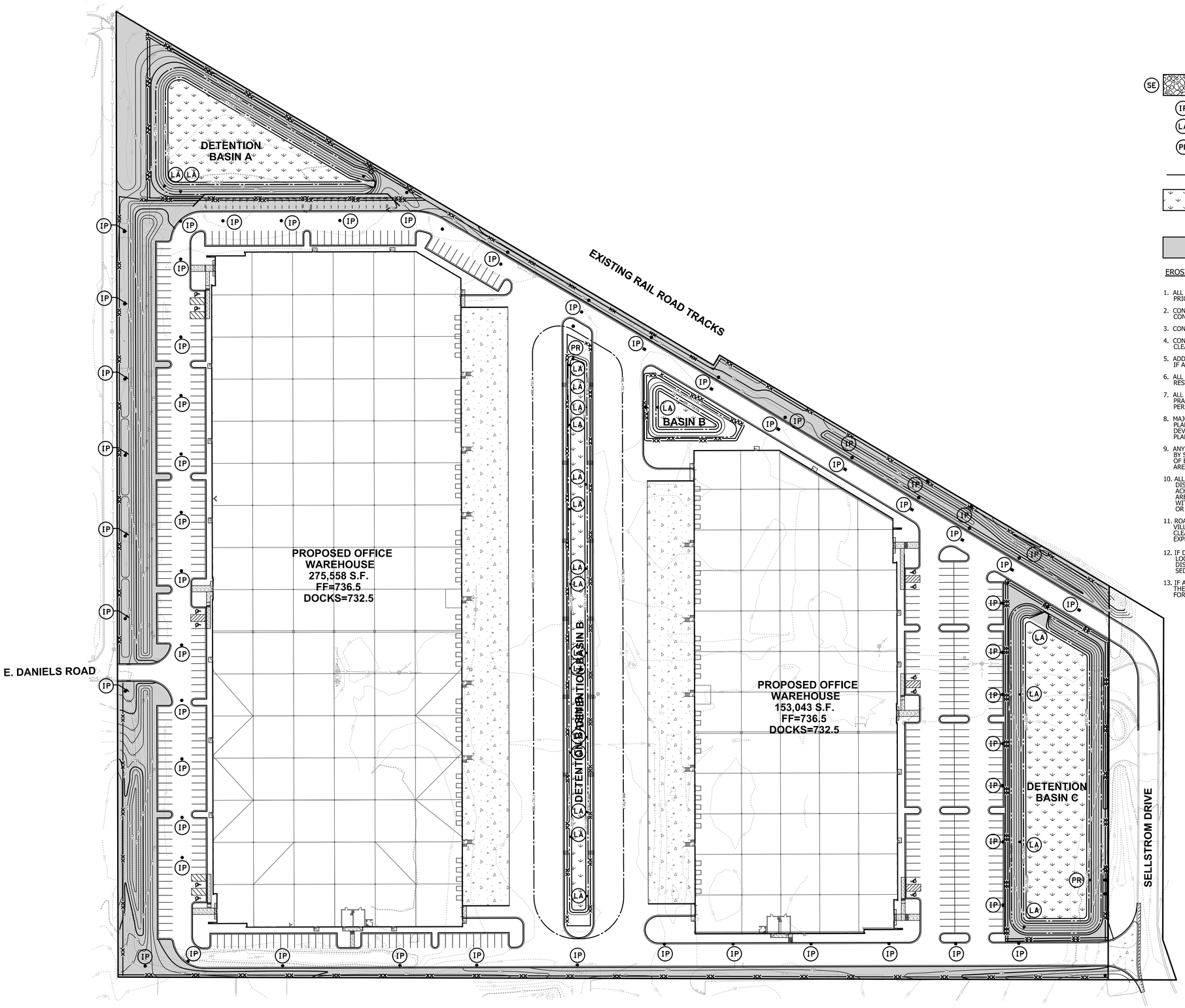

SYMBOL LEGEND

- SE — STABILIZED CONSTRUCTION ENTRANCE
- IP — INLET PROTECTION
- LA — LINED APRON WITH SEDIMENT TRAP
- PR — PERFORATED RISER
- SILT FENCE
- BMP SURFACE AREA (NATIVE PLANTED BOTTOMS; SEEDING TO BE COORDINATED WITH LANDSCAPE ARCHITECT)
- SOIL EROSION BLANKET (SEEDING TO BE COORDINATED WITH LANDSCAPE ARCHITECT)

N

SCALE 1" = 60'
0 60 120

EROSION CONTROL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION.
2. CONTRACTOR SHALL MAINTAIN PROPER SITE DRAINAGE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL.
4. CONTRACTOR IS RESPONSIBLE FOR KEEPING THE PUBLIC ROADWAYS CLEAN AND FREE OF DIRT AND DEBRIS AT ALL TIMES.
5. ADDITIONAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IF A SWPPP INSPECTION OF THE SITE INDICATES A DEFICIENCY.
6. ALL CONSTRUCTION TRAFFIC TO AND FROM THE SITE SHALL BE RESTRICTED TO THE STABILIZED CONSTRUCTION ENTRANCE.
7. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED AND REPAIRED AS NECESSARY TO PERFORM AS INTENDED.
8. MAJOR AMENDMENTS TO THE SITE DEVELOPMENT AND EROSION CONTROL PLANS SHALL BE SUBMITTED TO THE DEPARTMENT OF COMMUNITY DEVELOPMENT TO BE APPROVED IN THE SAME MANNER AS THE ORIGINAL PLANS.
9. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY SHOVELING OR STREET CLEANING (NOT FLUSHING) BEFORE THE END OF EACH WORK DAY AND TRANSPORTED TO A CONTROLLED SEDIMENT AREA.
10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED WITH PERMANENT SOIL STABILIZATION MEASURES. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 7 CALENDAR DAYS FOLLOWING THE END OF ACTIVE DISTURBANCE OR RE-DISTURBANCE.
11. ROADWAYS MUST BE KEPT FREE OF MUD, DEBRIS, ETC. AT ALL TIMES IN THE VILLAGE OF HOFFMAN ESTATES. CONTRACTOR IS RESPONSIBLE TO IMMEDIATELY CLEAN ANY MATERIAL TRACKED ONTO THE PUBLIC ROADWAY AT HIS OWN EXPENSE.
12. IF DE-WATERING DEVICES ARE USED DURING CONSTRUCTION, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM SOIL EROSION. ALL PUMPED DISCHARGES SHALL BE ROUTED THROUGH APPROPRIATELY DESIGNED SEDIMENT TRAPS OR BASINS.
13. IF A STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN THREE DAYS, THEN SEDIMENT AND EROSION CONTROL MEASURES SHALL BE PROVIDED FOR SUCH A STOCKPILE.

NO.	DATE	REMARKS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

SOIL EROSION & SEDIMENT CONTROL PLAN

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SPACECO INC.

FILENAME: 11061-SESC03

DATE: 01/11/20

JOB NO. 11061

SHEET SESC 22 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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EARTHWORK NOTES

1. GENERAL

A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE. THE CONTRACTOR SHALL OBTAIN AND READ THE GEOTECHNICAL REPORTS AVAILABLE FROM THE OWNER.

B. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTORS USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND APPRAISE HIMSELF OF ALL SITE CONDITIONS. THE CONTRACT PRICE SUBMITTED BY THE CONTRACTOR SHALL BE CONSIDERED AS LUMP SUM FOR THE COMPLETE PROJECT. NO CLAIMS FOR EXTRA WORK WILL BE RECOGNIZED UNLESS ORDERED IN WRITING BY THE OWNER.

C. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE ELEVATIONS AND THAT PAVEMENT THICKNESS, TOPSOIL, ETC. MUST BE SUBTRACTED TO DETERMINE SUBGRADE ELEVATIONS.

D. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION, AND PREVENT STORMWATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL NEGATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION AND TRAFFIC.

E. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION.

F. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE "SOIL EROSION AND SEDIMENTATION CONTROL MEASURES". THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC. TO PROTECT ADJACENT PROPERTY, WETLANDS, ETC. SHALL OCCUR BEFORE MASS GRADING BEGINS.

G. PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A "SNOW FENCE" AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE, THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.

H. EXCESS MATERIALS, IF NOT UTILIZED AS FILL SHALL BE COMPLETELY REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF OFF-SITE BY THE CONTRACTOR.

2. TOPSOIL EXCAVATION INCLUDES:

A. EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL. EXISTING VEGETATION SHALL BE REMOVED PRIOR TO STRIPPING TOPSOIL OR FILLING AREAS.

B. PLACEMENT OF THE EXCAVATED MATERIAL IN OWNER DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED, AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE.

C. TOPSOIL STOCKPILED FOR RESPREAD SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED OF OFF-SITE.

D. TOPSOIL RESPREAD SHALL INCLUDE HAULING AND SPREADING 6" OF TOPSOIL OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR DIRECTED BY THE OWNER.

E. MODERATE COMPACTION IS REQUIRED IN NON-STRUCTURAL FILL AREAS.

3. EARTH EXCAVATION INCLUDES:

A. EXCAVATION OF CLAY AND OTHER MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.1 FEET + OF THE PLAN SUBGRADE ELEVATIONS WHILE MAINTAINING PROPER DRAINAGE. THE + TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIALS SHALL "BALANCE" DURING THE FINE GRADING OPERATION.

B. PLACEMENT OF THE CLAY AND OTHER SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS TO WITHIN A TOLERANCE OF 0.1 FEET +. THE FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS THAT SHALL NOT EXCEED EIGHT (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE REQUIRED COMPACTION.

STRUCTURAL FILL MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE SITE NOT REQUIRING STRUCTURAL FILL, TO WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION. IN AREAS REQUIRING STRUCTURAL FILL, HOWEVER, THIS MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

C. COMPACTION OF THE CLAY AND OTHER SUITABLE MATERIALS, SHALL BE TO AT LEAST 93% OF THE MODIFIED PROCTOR DRY DENSITY WITHIN PROPOSED PAVEMENT AREAS, SIDEWALK, ETC. COMPACTION SHALL BE AT LEAST 95% OF THE MODIFIED PROCTOR WITHIN PROPOSED BUILDING PAD AREAS.

4. UNSUITABLE MATERIAL

UNSUITABLE MATERIAL SHALL BE CONSIDERED AS MATERIAL WHICH IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION, AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUBGRADE ELEVATION. THE DECISION TO REMOVE SAID MATERIAL, AND TO WHAT EXTENT, SHALL BE MADE BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

5. MISCELLANEOUS THE CONTRACTOR SHALL:

A. SPREAD AND COMPACT UNIFORMLY TO THE DEGREE SPECIFIED ALL EXCESS TRENCH SPOIL AFTER COMPLETION OF THE UNDERGROUND IMPROVEMENTS.

B. SCARIFY, DISC, AERATE, AND COMPACT, TO THE DEGREE SPECIFIED, THE UPPER TWELVE (12) INCHES OF THE SUITABLE SUBGRADE MATERIAL, IN ALL AREAS THAT MAY BE SOFT DUE TO EXCESS MOISTURE CONTENT. THIS APPLIES TO CUT AREAS AS WELL AS FILL AREAS.

C. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION.

D. BACKFILL THE CURB AND GUTTER AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL.

6. TESTING AND FINAL ACCEPTANCE

A. THE CONTRACTOR SHALL PROVIDE AS A MINIMUM, A FULLY LOADED SIX-WHEEL TANDEM AXLE TRUCK FOR PROOF ROLLING THE PAVEMENT SUBGRADE PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND THE BASE MATERIAL. THIS SHALL BE WITNESSED BY THE VILLAGE ENGINEER AND THE OWNER. SEE PAVING SPECIFICATION.

B. ANY UNSUITABLE AREA ENCOUNTERED AS A RESULT OF PROOF ROLLING SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL, OR OTHERWISE CORRECTED, APPROVED BY THE SOILS CONSULTANT.

SIGNING AND PAVEMENT MARKING

1. ALL SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SSRBC), VILLAGE OF PALATINE CODE AND THESE PLANS.

2. CONTRACTOR SHALL ESTABLISH LOCATION OF ALL SIGNS AND MARKINGS FOR APPROVAL BY THE OWNER PRIOR TO INSTALLATION.

3. SIGNS: SIGNS SHALL BE CONSTRUCTED OF 0.080 INCH THICK FLAT ALUMINUM PANELS WITH REFLECTORIZED LEGEND ON THE FACE IN ACCORDANCE WITH (SSRBC) SECTION 720. LEGEND SHALL BE IN ACCORDANCE WITH MUTCD AND AS SHOWN ON THE PLANS.

4. POSTS: SIGN POSTS SHALL BE A HEAVY DUTY STEEL "U" SHAPED CHANNEL WEIGHING 3.0 POUNDS/FOOT SUCH AS A TYPE B METAL POST PER (SSRBC) SECTION 729 [OR: 2" PERFORATED STEEL TUBE PER (SSRBC) SECTION 728].

5. SIGNS AND POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE ABOVE (SSRBC) SECTIONS AND IDOT STANDARD 729001 EXCEPT AS MODIFIED BY THE PLANS.

6. PAVEMENT MARKINGS: ALL PAVEMENT MARKINGS IN THE ROADWAY LIMITS, SUCH AS STOP LINES, CENTERLINES, CROSSWALKS AND DIRECTIONAL ARROWS SHALL BE REFLECTORIZED THERMOPLASTIC PER (SSRBC) SECTION 780, EXCEPT AS MODIFIED BY THE PLANS,

7. PAVEMENT MARKINGS ON PARKING LOT STALLS AND SIMILAR "LOW WEAR" APPLICATION, SHALL BE PAINT IN ACCORDANCE TO (SSRBC) SECTION 780, EXCEPT AS MODIFIED BY THE PLANS. REFLECTIVE BEADS ARE NOT REQUIRED.

8. COLOR, WIDTH, STYLE, AND SIZE OF ALL MARKINGS SHALL BE IN ACCORDANCE WITH (MUTCD) EXCEPT AS MODIFIED BY THE PLANS,

9. THERMOPLASTIC MARKINGS SHALL BE INSTALLED WHEN THE PAVEMENT TEMPERATURE IS 557 F AND RISING. PAINT MARKINGS MAY BE INSTALLED WHEN THE AIR TEMPERATURE IS 507 F AND RISING.

SOIL EROSION AND SEDIMENTATION CONTROL SPECIFICATIONS

1. GENERAL

A. THIS WORK SHALL BE PREFORMED IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF THE VILLAGE CODE, THE ILLINOIS PROCEDURES AND STANDARDS FOR URBAN SOIL EROSION AND SEDIMENTATION CONTROL, AND IEPA STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENTATION CONTROL.

B. SEE ALSO, STORMWATER POLLUTION PREVENTION PLAN, SHEET NO, C13.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.

D. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE FUNCTIONAL BEFORE LAND IS OTHERWISE DISTURBED ON THE SITE.

SIGNING AND PAVEMENT MARKING

2. IMPLEMENTATION

A. BEFORE STARTING CLEARING AND SITE GRADING WORK, A CONSTRUCTION ENTRANCE AND SILT FENCES SHALL BE INSTALLED AS SHOWN ON THE PLANS, IF DIRECTED BY THE VILLAGE ENGINEER, THE CONTRACTOR SHALL INSTALL ADDITIONAL SILT FENCES WHERE NEEDED.

B. THE CONSTRUCTION ENTRANCE TO THE SITE SHALL BE STABILIZED WITH GRAVEL PRIOR TO ANY WORK ON THE SITE. THE ENTRANCE SHALL BE MONITORED PERIODICALLY FOR ITS EFFECTIVENESS TO COLLECT DIRT WHICH COULD LEAVE THE SITE VIA CONSTRUCTION VEHICLES. ANY DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY.

PAVING NOTES

1. GENERAL

A. PAVING WORK INCLUDES FINAL SUBGRADE SHAPING, PREPARATION AND COMPACTION; PLACEMENT OF SUB-BASE OR BASE COURSE MATERIALS; BITUMINOUS BINDER AND/OR SURFACE COURSES; FORMING, FINISHING AND CURING CONCRETE PAVEMENT, CURBS AND WALKS; AND FINAL CLEAN-UP AND ALL RELATED WORK.

B. COMPACTION TESTS, (PERFORMED BY THE SAND CONE METHOD ASSHTO T-191 OR WITH AN APPROVED NUCLEAR DENSITY-MOISTURE METER) SHALL BE TAKEN IN EACH FILL SECTION, WITH THE MAXIMUM DISTANCE BETWEEN TESTS OF THREE HUNDRED (300) FEET. DENSITY SHALL BE NINETY-FIVE (95) PERCENT OF THE MAXIMUM DENSITY.

C. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE PROPER BARRICADING, WARNING DEVICES AND THE SAFE MANAGEMENT OF TRAFFIC WITHIN THE AREA OF CONSTRUCTION, ALL SUCH DEVICES AND THEIR INSTALLATION SHALL CONFORM TO THE ILLINOIS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AND IN ACCORDANCE WITH THE VILLAGE OF PALATINE CODE.

2. SUB-GRADE PREPARATION

A. EARTHWORK FOR PROPOSED PAVEMENT SUBGRADE SHALL BE FINISHED TO WITHIN 0.1 FOOT, PLUS OR MINUS, OF PLAN ELEVATION. THE CONTRACTOR SHALL SATISFY HIMSELF THAT THE SUBGRADE HAS BEEN PROPERLY PREPARED AND THAT THE FINISH TOP SUBGRADE ELEVATION HAS BEEN GRADED WITHIN TOLERANCES ALLOWED IN THESE SPECIFICATIONS, UNLESS THE CONTRACTOR ADVISES THE OWNER AND ENGINEER IN WRITING PRIOR TO FINE GRADING FOR BASE COURSE CONSTRUCTION, IT IS UNDERSTOOD THAT HE HAS APPROVED AND ACCEPTS THE RESPONSIBILITY FOR THE SUBGRADE.

B. PRIOR TO THE PLACEMENT OF THE BASE COURSE, THE SUBGRADE MUST BE PROOF ROLLED AND INSPECTED FOR UNSUITABLE MATERIALS AND/OR EXCESSIVE MOVEMENT. IF UNSUITABLE SUBGRADE IS ENCOUNTERED, IT SHALL BE CORRECTED IN A MANNER APPROVED BY THE OWNER OR HIS REPRESENTATIVE. THIS MAY INCLUDE ONE OR MORE OF THE FOLLOWING METHODS:

1) SCARIFY DISC AND AERATE.
2) REMOVE AND REPLACE WITH STRUCTURAL CLAY FILL.
3) REMOVE AND REPLACE WITH GRANULAR MATERIAL.
4) USE OF GEOTEXTILE FABRIC.

MAXIMUM DEFLECTION ALLOWED IN ISOLATED AREAS MAY BE1#4" TO1#2" IF NO DEFLECTION OCCURS OVER THE MAJORITY OF THE AREA.

C. PRIOR TO THE CONSTRUCTION OF THE CURB AND GUTTER AND THE PLACEMENT OF THE BASE MATERIAL, THE PAVEMENT AREA SHALL BE FINE GRADED TO WITHIN 0.04 FEET (1/2") OF FINAL SUBGRADE ELEVATION, TO A POINT TWO (2) FEET BEYOND THE BACK OF CURB, SO AS TO INSURE THE PROPER THICKNESS OF PAVEMENT COURSES, NO CLAIMS FOR EXCESS QUANTITY OF BASE MATERIALS DUE TO IMPROPER SUBGRADE PREPARATION WILL BE HONORED.

D. PRIOR TO PLACEMENT OF THE BASE COURSE, THE SUBGRADE MUST BE APPROVED BY THE VILLAGE ENGINEER AND/OR OWNER.

3. CONCRETE WORK

A. ALL EXTERIOR CONCRETE SHALL BE PORTLAND CEMENT CONCRETE CLASS S1 OR PV PER (SSRBC) SECTION 1020.04 WITH AIR ENTRTAINMENT OF NOT LESS THAN FOUR (4%) OR MORE THAN SEVEN (7%) PERCENT. CONCRETE SHALL BE A MINIMUM OF SIX (6) BAG MIX AND SHALL DEVELOP A MINIMUM OF 3,500 PSI COMPRESSIVE STRENGTH OF TWENTY-EIGHT (28) DAYS. ALL CONCRETE SHALL BE BROOM FINISHED PERPENDICULAR TO THE DIRECTION OF TRAVEL.

B. CONCRETE CURB AND/OR COMBINATION CURB AND GUTTER SHALL BE OF THE TYPE SHOWN ON THE PLANS. THE CONTRACTOR IS CAUTIONED TO REFER TO THE CONSTRUCTION STANDARDS AND THE PAVEMENT CROSS-SECTION TO DETERMINE THE GUTTER FLAG THICKNESS AND THE AGGREGATE BASE COURSE THICKNESS BENEATH THE CURB AND GUTTER. PREMOLDED FIBER EXPANSION JOINTS, WITH TWO NO.6 X 18" EPOXY COATED STEEL DOWEL BARS, SHALL BE INSTALLED AT SIXTY (60) FOOT INTERVALS AND AT ALL PC'S, PT'S AND CURB RETURNS. ALTERNATE ENDS OF THE DOWEL BARS SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES. SAWED OR FORMED CONTRACTION JOINTS SHALL BE PROVIDED AT NO GREATER THAN TWENTY (20) FOOT INTERVALS BETWEEN EXPANSION JOINTS. NO HONEYCOMBING OF THE CURB AND GUTTER WILL BE ACCEPTED.

C. TWO (2) NO. 5 EPOXY COATED STEEL DOWEL BARS SHALL BE INSTALLED A MINIMUM OF TEN (10) FEET ON EITHER SIDE OF ALL UTILITY TRENCHES.

D. CURBS SHALL BE DEPRESSED AT LOCATIONS WHERE PUBLIC WALKS/PEDESTRIAN PATHS INTERSECT CURB LINES, AND OTHER LOCATIONS AS DIRECTED, FOR THE PURPOSE OF PROVIDING ACCESSIBILITY. (SEE CONSTRUCTION STANDARDS FOR DETAILS).

E. THE CURBS SHALL BE BACKFILLED AFTER THEIR CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE.

F. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE SCORED JOINTS AT 5 FOOT INTERVALS AND1#2" PREMOLDED FIBER EXPANSION JOINTS AT 50 FOOT INTERVALS, AND ADJACENT TO CONCRETE CURBS, DRIVEWAYS, FOUNDATIONS, ETC.

G. CONCRETE APRONS SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE 6" X 6" NO. 6 WELDED WIRE MESH IN ALL APRONS AND RAMPS. PROVIDE1#2" PREMOLDED FIBER EXPANSION JOINT ADJACENT TO CURBS AND CONCRETE SIDEWALKS. PROVIDE SAWED OR FORMED CONTRACTION JOINT AT MID-POINT AND 15 FOOT MAXIMUM.

H. STANDARD REINFORCED CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. SAWED OR FORMED CONTRACTION EXPANSION JOINTS SHALL BE AS PROVIDED BY THE CONTRACTOR TO PREVENT CRACKING.

I. CONCRETE CURING AND PROTECTION SHALL BE IN ACCORDANCE WITH (SSRBC) - METHOD A, B, OR C. TWO (2) COATS OF BOILED LINSEED OIL IN CONFORMANCE WITH (SSRBC) SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES.

J. THE COST OF AGGREGATE BASE OR SUB-BASE UNDER CONCRETE WORK SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE CONCRETE ITEM.

4. FLEXIBLE PAVEMENT

A. THE PAVEMENT MATERIALS FOR BITUMINOUS STREETS, PARKING LOTS, AND DRIVEWAYS SHALL BE AS DETAILED ON THE PLANS. UNLESS OTHERWISE SHOWN ON THE PLANS, THE FLEXIBLE PAVEMENTS SHALL CONSIST OF AGGREGATE BASE COURSE, TYPE B, (OR BAM IF SELECTED BY THE OWNER); BITUMINOUS CONCRETE BINDER COURSE, MIXTURE B; AND BITUMINOUS CONCRETE SURFACE COURSE, CLASS 1, MIXTURE D, TYPE 2; OF THE THICKNESS AND MATERIALS SPECIFIED ON THE PLANS, THICKNESSES SPECIFIED SHALL BE CONSIDERED TO BE THE MINIMUM COMPACTED THICKNESS.

B. ALL TRAFFIC SHALL BE KEPT OFF THE COMPLETED AGGREGATE BASE UNTIL THE BINDER COURSE IS LAID. THE AGGREGATE BASE SHALL BE UNIFORMLY PRIME COATED AT A RATE OF 0.4 TO 0.5 GALLONS PER SQUARE YARD PRIOR TO PLACING THE BINDER COURSE. PRIME COAT MATERIALS SHALL BE BITUMINOUS M.C. - 30.

C. PRIOR TO PLACEMENT OF THE SURFACE COURSE, THE BINDER COURSE SHALL BE CLEANED, AND TACK COATED IF DUSTY OR DIRTY. ALL DAMAGED AREAS IN THE BINDER, BASE OR CURB SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER PRIOR TO LAYING THE SURFACE COURSE. THE CONTRACTOR SHALL PROVIDE WHATEVER EQUIPMENT AND MANPOWER NECESSARY, INCLUDING THE USE OF POWER BROOMS IF REQUIRED BY THE OWNER, TO PREPARE THE PAVEMENT FOR APPLICATION OF THE SURFACE COURSE. THE TACK COAT SHALL BE UNIFORMLY APPLIED TO THE BINDER COURSE AT A RATE OF 0.05 TO 0.10 GALLONS PER SQUARE YARD. TACK COAT SHALL BE AS SPECIFIED IN (SSRBC) SECTION 406.02.

D. SEAMS IN BAM, BINDER AND SURFACE COURSE SHALL BE STAGGERED A MINIMUM OF 6".

E. FOR NEW STREETS, THE CONTRACTOR SHALL PERMIT THE BITUMINOUS CONCRETE BINDER COURSE TO WEATHER ONE (1) WINTER SEASON PRIOR TO THE INSTALLATION OF THE BITUMINOUS CONCRETE SURFACE COURSE UNLESS OTHERWISE SPECIFIED BY THE VILLAGE ENGINEER OR OWNER.

5. TESTING AND FINAL ACCEPTANCE

A. THE CONTRACTOR SHALL FOLLOW THE QUALITY CONTROL TESTING PROGRAM FOR CONCRETE AND PAVEMENT MATERIALS ESTABLISHED BY THE OWNER AND/OR VILLAGE OF PALATINE.

B. WHEN REQUESTED BY THE OWNER, TEST RESULTS AND DOCUMENTATION FOR THE CONCRETE, BASE COURSE, BITUMINOUS CONCRETE BINDER, AND/OR SURFACE COURSE, SHALL BE SUBMITTED FOR VERIFICATION.

C. PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE, THE CONTRACTOR, WHEN REQUIRED BY THE OWNER OR VILLAGE OF PALATINE, SHALL OBTAIN SPECIMENS OF THE BINDER COURSE WITH A CORE DRILL WHERE DIRECTED, FOR THE PURPOSE OF THICKNESS VERIFICATION.

D. WHEN REQUIRED BY THE OWNER OR VILLAGE OF PALATINE, THE CONTRACTOR SHALL OBTAIN SPECIMENS OF THE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT STRUCTURE WITH A CORE DRILL WHERE DIRECTED, IN ORDER TO CONFIRM THE PLAN THICKNESS. DEFICIENCIES IN THICKNESS SHALL BE ADJUSTED FOR BY THE METHOD DESCRIBED IN (SSRBC), ART, 407.10.

E. FINAL ACCEPTANCE OF THE TOTAL PAVEMENT INSTALLATION SHALL BE SUBJECT TO THE TESTING AND CHECKING REQUIREMENTS CITED ABOVE.

SANITARY SEWER NOTES

1. SANITARY SEWER PIPE SHALL BE PVC (POLYVINYL CHLORIDE) PLASTIC PIPE CONFORMING TO ASTM D-3034 WITH PUSH-ON JOINTS CONFORMING TO ASTM D-3212 AND A STANDARD DIMENSION REATIO (SDR) OF 26 EXCEPT WHERE NOTED OTHERWISE..

2. SANITARY SEWER PIPE 18" AND LARGER, WHERE NOTED ON THE PLANS, OR WHERE THE IEPA MINIMUM SEPARATION CANNOT BE MAINTAINED, SHALL BE ONE OF THE FOLLOWING:

PLAN CODE	DESCRIPTION
DIP:	DUCTILE IRON WATERMAIN QUALITY PIPE, CLASS 52, (ANSI 21.51) WITH MECHANICAL OR O-RING GASKETED JOINTS (ANSI 21.11).

3. "BAND-SEAL" OR SIMILAR FLEXIBLE TYPE COUPLINGS SHALL BE USED WHEN CONNECTING SEWER PIPES OF DISSIMILAR MATERIALS.

4. BEDDING: BEDDING SHALL CONSIST OF A MINIMUM OF FOUR (4") INCHES OF COMPACTED CRUSHED GRAVEL OR STONE,1#4" - 1" IN SIZE. THE SEWER SHALL HAVE MECHANICALLY TAMPED CRUSHED GRAVEL OR STONE COVER ABOVE THE TOP OF THE PIPE TO A MINIMUM OF TWELVE (12") INCHES FOR PVC PIPE AND TO THE SPRING LINE FOR DIP. THE BEDDING AND COVER MATERIAL SHALL BE ASTM D-2321 CLASS II FOR PVC PIPE AND ASTM D-448 SIZE 67 FOR DIP. THE COST OF THE BEDDING AND COVER SHALL BE MERGED WITH THE UNIT PRICE BID FOR THE SEWER.

5. ALL UNSUITABLE MATERIAL SHALL BE REMOVED BELOW THE PROPOSED SANITARY SEWER AND REPLACED WITH COMPACTED CA-6 CRUSHED GRAVEL OR STONE.

6. ALL TRENCHES BENEATH PROPOSED OR EXISTING UTILITIES, PAVEMENTS, ROADWAYS, SIDEWALKS, AND FOR A DISTANCE OF FIVE (5') FEET ON EITHER SIDE OF SAME, AND/OR WHERE SHOWN ON THE PLANS, SHALL BE BACKFILLED WITH SELECT GRANULAR BACKFILL (CA-6) AND THOROUGHLY MECHANICALLY COMPACTED IN 9" THICK (LOOSE MEASUREMENT) LAYERS. JETTING WITH WATER IS NOT PERMITTED.

7. ALL SANITARY SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.

8. ALL FLOOR DRAINS SHALL CONNECT TO THE SANITARY SEWER.

9. CONNECTIONS TO EXISTING SANITARY SEWER SYSTEM SHALL NOT BE DONE UNTIL AUTHORIZED BY THE VILLAGE OF PALATINE AND MWRDGC.

10. WATERMAINS SHALL BE SEPARATED FROM SANITARY SEWERS AND STORM SEWERS IN ACCORDANCE WITH IEPA REQUIREMENTS AS SPECIFIED IN "WATER MAIN" SECTION.

11. NO WATER LINE SHALL BE PLACED IN THE SAME TRENCH AS A SEWER LINE EXCEPT UNDER SPECIAL CIRCUMSTANCES AND THEN ONLY UNDER THE FOLLOWING RULES:

A. PERMISSION SHALL BE OBTAINED FROM THE VILLAGE OF PALATINE ENGINEERING DEPARTMENT IN WRITING PRIOR TO BEGINNING CONSTRUCTION.

B. THE BOTTOM OF A WATER LINE SHALL BE INSTALLED ON A SHELF A MINIMUM OF 18" ABOVE THE TOP OF THE SEWER AND 18" HORIZONTALLY AWAY FROM THE EDGE OF THE SEWER.

12. MANHOLES: SANITARY SEWER MANHOLES SHALL BE 4'-0" I.D. PRECAST CONCRETE SECTIONS CONFORMING TO ASTM D-478 WITH PREFORMED BITUMINOUS OR "O" RING JOINTS, IN ACCORDANCE WITH VILLAGE REGULATIONS, AND HAVE AN ECCENTRIC CONE INSTALLED TO LINE UP WITH THE MANHOLE STEPS. ALL MANHOLE STEPS SHALL BE AT 16" O.C. SIMILAR TO NEENAH R-1980.

ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER TIGHT SLEEVES. THE BOTTOM OF MANHOLE SHALL HAVE A CONCRETE BENCH POURED TO FACILITATE SMOOTH FLOWS.

13. FRAMES AND LIDS: ALL SANITARY SEWER MANHOLE FRAMES AND LIDS SHALL BE NEENAH R-1712 UNLESS OTHERWISE NOTED ON THE PLANS. THE LIDS SHALL HAVE RECESSED (CONCEALED) PICK HOLE AND BE SELF SEALING WITH AN "O" RING GASKET. THE LIDS SHALL HAVE THE WORDS "SANITARY" EMBOSSED ON THE SURFACE. THE JOINTS BETWEEN FRAME AND CONCRETE SECTION SHALL BE SEALED WITH A BUTYL ROPE.

14. A MAXIMUM OF EIGHT (8) INCHES OF CONCRETE ADJUSTING RINGS SHALL BE USED TO ADJUST FRAME ELEVATIONS. RINGS SHALL BE SEALED TOGETHER WITH BUTYL ROPE.

15. DROP MANHOLE ASSEMBLIES: DROP MANHOLE ASSEMBLIES SHALL BE PROVIDED AT THE JUNCTION OF SANITARY SEWERS WHERE THE DIFFERENCE IN INVERT GRADES EXCEEDS TWO FEET (2'). OR AS SHOWN ON THE PLANS. THE ENTIRE DROP ASSEMBLY SHALL BE CAST IN CONCRETE MONOLITHICALLY WITH THE MANHOLE BARREL SECTION.

16. CLEANING: ALL MANHOLES AND PIPES SHALL BE THOROUGHLY CLEANED OF DIRT AND DEBRIS, AND ALL VISIBLE LEAKAGE ELIMINATED, BEFORE FINAL INSPECTION AND ACCEPTANCE.

17. TESTING: DEFLECTION AND LEAKAGE TESTING WILL BE REQUIRED. THE PROCEDURE AND ALLOWABLE TESTING LIMITS SHALL BE AS SPECIFIED IN THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", OR MUNICIPAL CODES.

18. TESTING THE ALIGNMENT/STRAIGHTNESS SHALL BE IN ACCORDANCE WITH MUNICIPAL CODE.

19. TELEVISING: ALL SANITARY SEWERS SHALL BE TELEVISED AND A COPY OF THE TAPE AND A WRITTEN REPORT SHALL BE SUBMITTED AND REVIEWED BY THE OWNER OR MUNICIPALITY BEFORE FINAL ACCEPTANCE. THE REPORT SHALL INCLUDE STUB LOCATION AS WELL AS A DESCRIPTION OF ALL DEFECTS, WATER LEVEL, LEAKS AND LENGTHS. IDENTIFY MANHOLE TO MANHOLE BOTH VERBALLY AND ON-SCREEN USING MANHOLE NUMBERS FROM APPROVED PLANS. ORDER OF WRITTEN REPORT SHALL BE THE SAME AS THE VIDEOTAPES.

20. TEST RESULTS: IF THE SANITARY SEWER INSTALLATION FAILS TO MEET THE TEST REQUIREMENTS SPECIFIED, THE CONTRACTOR SHALL DETERMINE THE CAUSE OR CAUSES OF THE DEFECT AND SHALL, AT HIS OWN EXPENSE REPAIR, OR REPLACE ALL MATERIALS, AND WORKMANSHIP AS MAY BE NECESSARY TO COMPLY WITH THE TEST REQUIREMENTS.

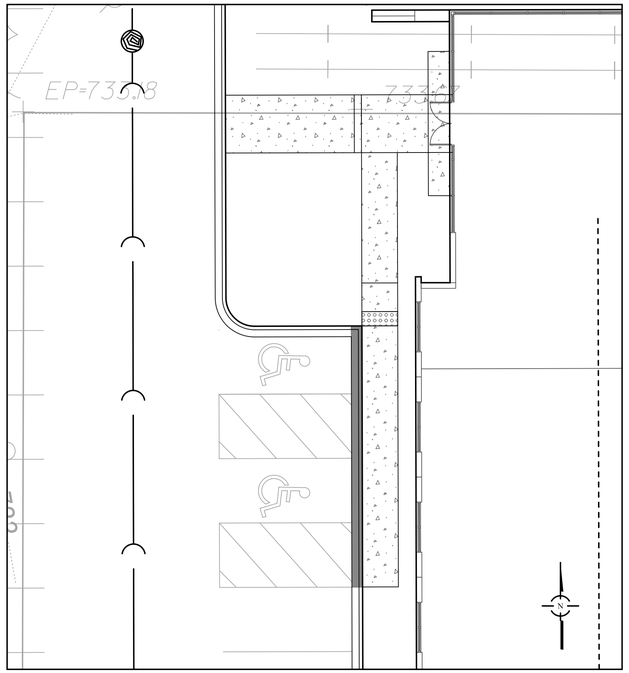
21. CERTIFICATION: CONTRACTOR SHALL SUBMIT CERTIFIED COPIES OF ALL REPORTS OF TESTS CONDUCTED BY AN INDEPENDENT LABORATORY BEFORE INSTALLATION OF PVC PLASTIC PIPE. TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH STANDARD METHOD OF TEST FOR "EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL PLATE LOADING". ASTM STANDARDS D-2412 OR D-2241 AS APPROPRIATE FOR THE PIPE TO BE USED. TESTS SHALL ALSO BE CONDUCTED TO DEMONSTRATE JOINT PERFORMANCE AT 5% MAXIMUM DIAMETRIC DEFLECTION OF THE SPIGOT.

22. RECORD DRAWINGS: THE CONTRACTOR SHALL PROVIDE ALL INFORMATION TO PREPARE RECORD DRAWING(S) INCLUDING SERVICE STUB LOCATIONS, TO SPACECO. SPACECO SHALL PREPARE RECORD DRAWINGS AND SUBMIT TO APPROPRIATE PUBLIC AGENCIES. IF FINAL MEASUREMENTS INDICATE DEFICIENCIES, THE CONTRACTOR, AT HIS OWN COST, WILL ADJUST MANHOLES AND/OR SEWERS TO PROPER ELEVATIONS AND OTHERWISE CORRECT THE DEFICIENCIES.

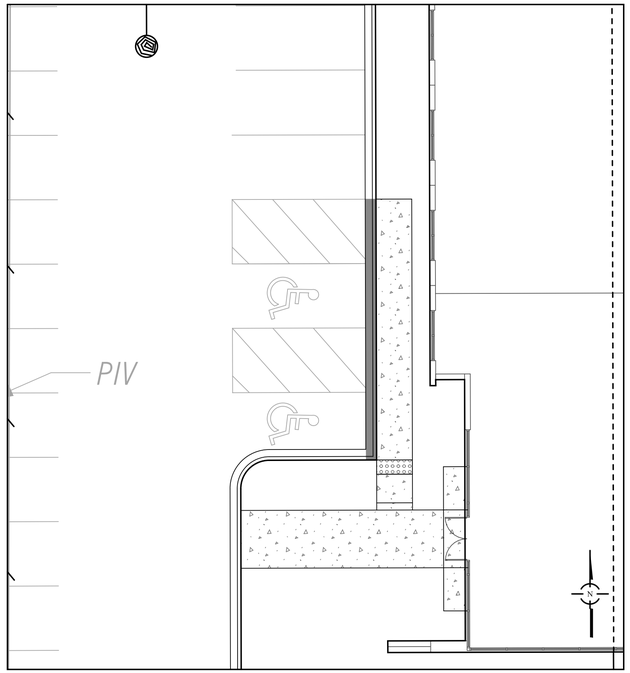
STORM SEWER NOTES

1. STORM SEWER PIPE: ALL STORM SEWER PIPE SHALL EITHER RCP OR POLYETHYLENE PIPE, IF APPROVED BY THE VILLAGE ENGINEER, UNLESS OTHERWISE NOTED ON THE PLANS, IN ACCORDANCE WITH THE FOLLOWING:

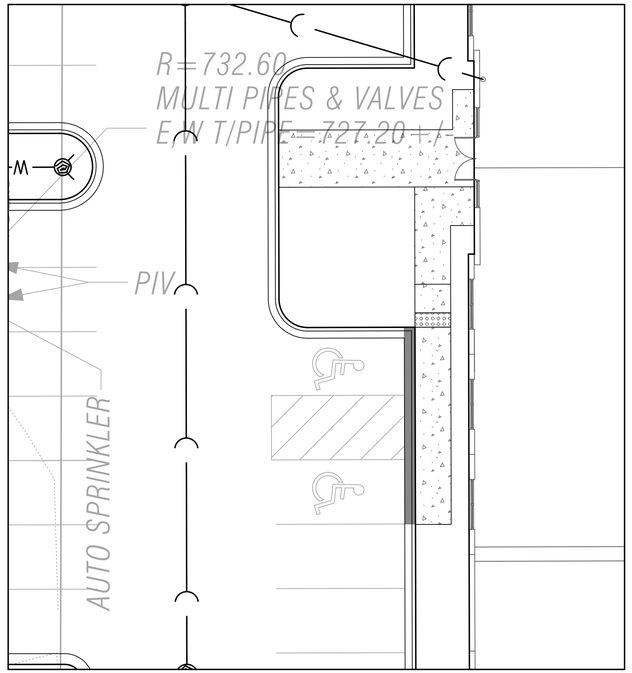
PLAN CODE	MATERIAL
RCP:	REINFORCED CONCRETE PIPE (ASTM C-76) WITH O-RING GASKETED JOINTS (ASTM C-443); TYPE 1, CLASS IV PER SSRBC SECTION 603. ELLIPTICAL RCCP PIPE SHALL BE TYPE 1, HE-III PER SSRBC SECTION 511, PRECAST FLARED END SECTIONS MAY HAVE MASTIC JOINTS.
ADS:	ADVANCED DRAINAGE SYSTEMS POLYETHYLENE PIPE: AASHTO M-252 (TYPE S) FOR DIAM. 4"-10", AASHTO M-294 (TYPE S OR D) FOR DIAM. 12"-60". TYPE S-CORRUGATED EXTERIOR AND SMOOTH INTERIOR WALLS. TYPE D-SMOOTH EXTERIOR AND



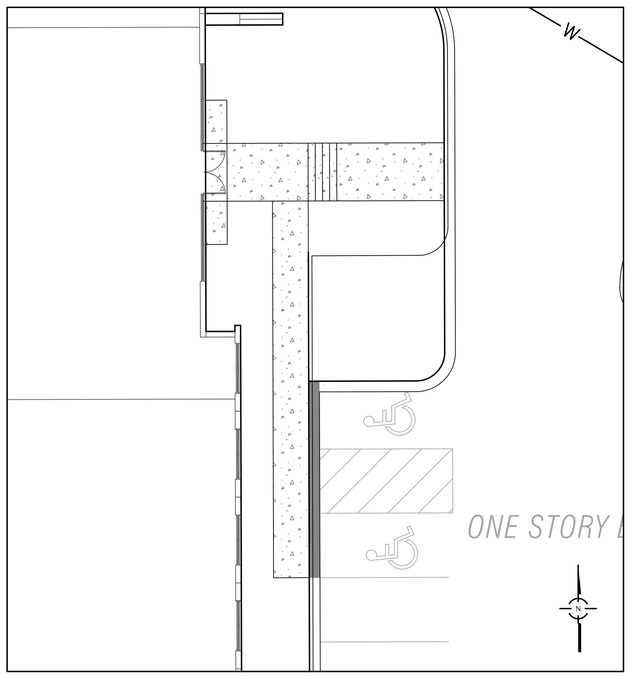
BUILDING 1 - NORTHWEST ENTRY



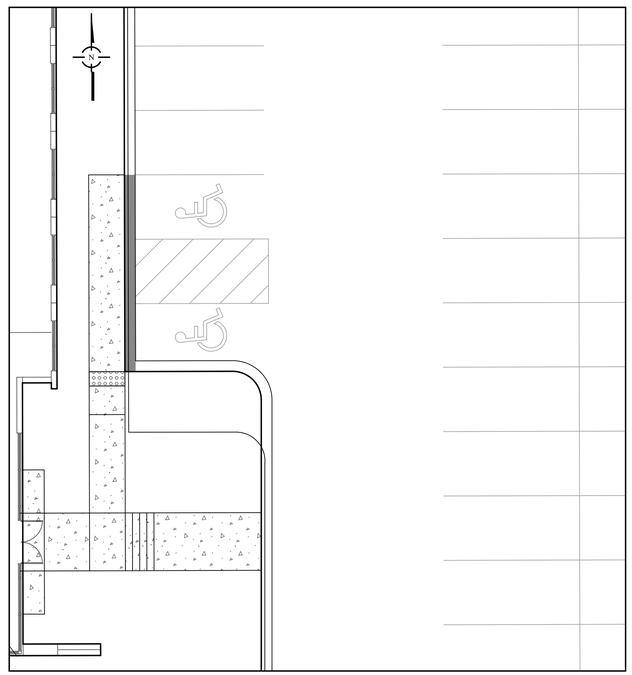
BUILDING 1 - SOUTHWEST ENTRY



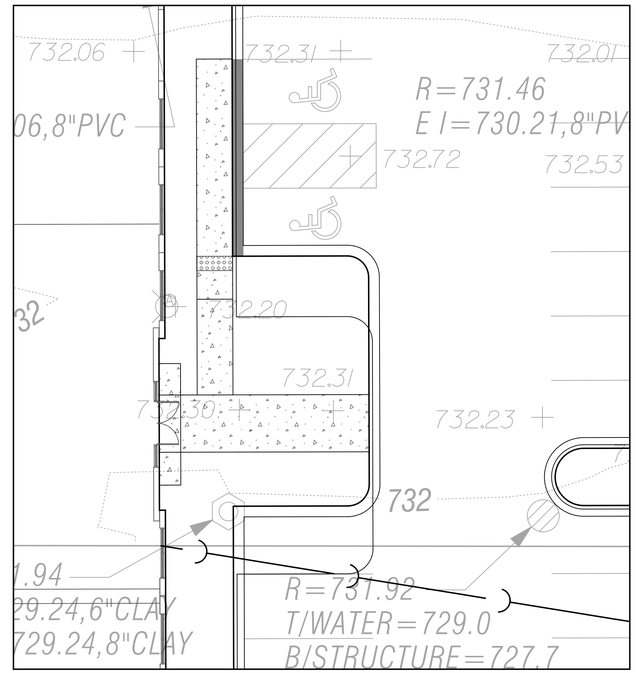
BUILDING 1 - WEST ENTRY



BUILDING 2 - NORTHEAST ENTRY



BUILDING 2 - SOUTHEAST ENTRY



BUILDING 2- EAST ENTRY

DETAILED ENTRANCE GRADING TO BE COMPLETED AFTER INITIAL REVIEW

NO.	DATE	REMARKS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

DETAIL -1

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061-DET01

DATE: 01/11/20

JOB NO. 11061

SHEET **DET01**
24 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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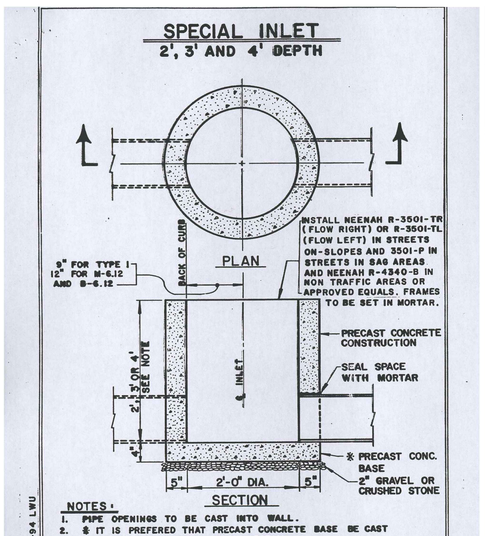
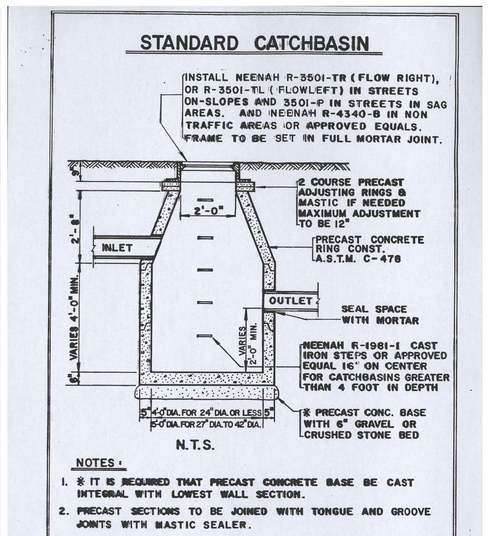
SPECIAL INLET
2', 3' AND 4' DEPTH



NOTES :
1. PIPE OPENINGS TO BE CAST INTO WALL.
2. ※ IT IS PREFERED THAT PRECAST CONCRETE BASE BE CAST INTEGRAL WITH LOWEST WALL SECTION.
3. WHENEVER TWO INLETS ARE CONNECTED BY MORE THAN 20 FEET OF CONNECTION PIPE, THE INLET RECEIVING THE FLOW SHALL BE 3' OR 4'.

01-05-94 LWU

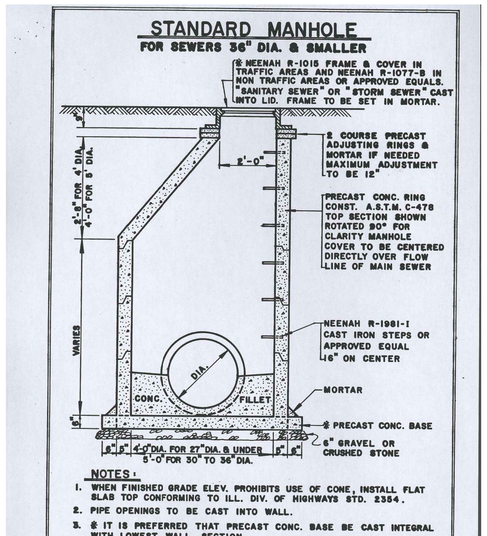
STANDARD CATCHBASIN



NOTES :
1. ※ IT IS REQUIRED THAT PRECAST CONCRETE BASE BE CAST INTEGRAL WITH LOWEST WALL SECTION.
2. PRECAST SECTIONS TO BE JOINED WITH TONGUE AND GROOVE JOINTS WITH MASTIC SEALER.

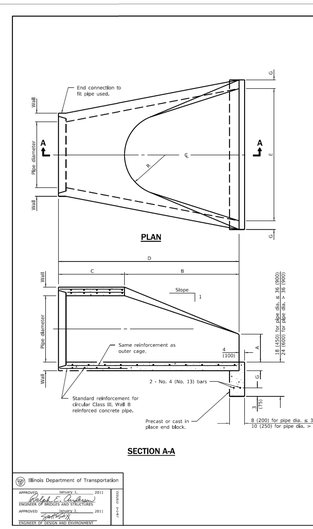
01-05-94 LWU

STANDARD MANHOLE
FOR SEWERS 36" DIA. & SMALLER



NOTES :
1. WHEN FINISHED GRADE ELEV. PROHIBITS USE OF CONE, INSTALL FLAT SLAB TOP CONFORMING TO ILL. DIV. OF HIGHWAYS STD. 2354.
2. PIPE OPENINGS TO BE CAST INTO WALL.
3. ※ IT IS PREFERRED THAT PRECAST CONC. BASE BE CAST INTEGRAL WITH LOWEST WALL SECTION.
4. PRECAST SECTIONS TO BE JOINED WITH TONGUE AND GROOVE JOINTS WITH RUBBER RING GASKET.

LTW JUNE 1982



PIPE DIA.	APPROX. QTY., lbs. (kg)	WALL	A	B	C	D	E	G	R	APPROX. SLOPE
12 (300)	530 (240)	2 (51)	4 (102)	24 (610)	4'-0⅞" 1.241 m	6'-0⅝" 1.853 m	24 (610)	2 (51)	9 (229)	1:2:4
15 (375)	740 (335)	2⅜ (57)	5 (152)	27 (686)	5'-3⅛" 1.168 m	8'-1" 2.454 m	30 (762)	2½ (57)	11 (280)	1:2:4
18 (450)	990 (450)	2½ (64)	9 (229)	27 (686)	5'-3⅛" 1.168 m	8'-1" 2.454 m	36 (914)	2½ (64)	12 (305)	1:2:4
21 (525)	1280 (580)	2¾ (70)	9 (229)	35 (889)	7'-7⅛" 1.685 m	8'-1" 2.454 m	3'-6" 1.067 m	2¾ (70)	13 (330)	1:2:4
24 (600)	1570 (690)	3 (76)	9½ (241)	35 (889)	7'-7⅛" 1.685 m	10 (762)	4'-0" 1.219 m	3 (76)	14 (356)	1:2:5
27 (675)	1930 (875)	3¼ (83)	10½ (267)	4'-0" 1.219 m	8'-11⅛" 2.667 m	4'-6" 1.372 m	3½ (83)	14½ (368)	1:2:4
30 (750)	2190 (995)	3½ (89)	12 (305)	4'-4" 1.321 m	10½ (520)	6'-1⅜" 1.874 m	5'-0" 1.524 m	3½ (89)	15 (381)	1:2:5
33 (825)	3200 (1450)	3¾ (95)	13½ (343)	4'-10⅝" 1.480 m	11½ (597)	6'-1⅜" 2.483 m	5'-6" 1.676 m	3¾ (95)	17½ (445)	1:2:5
36 (900)	4100 (1860)	4 (102)	15 (381)	5'-3" 1.6 m	13½ (673)	8'-1⅜" 2.483 m	6'-0" 1.829 m	4 (102)	20 (508)	1:2:5
42 (1050)	5340 (2420)	4½ (114)	17 (432)	5'-9" 1.753 m	15 (762)	8'-1⅜" 2.483 m	6'-6" 1.981 m	4½ (114)	23 (584)	1:2:5
48 (1200)	6540 (2970)	5 (127)	18 (457)	6'-3" 1.829 m	16½ (660)	8'-1⅜" 2.486 m	7'-0" 2.134 m	5 (127)	25½ (559)	1:2:5
54 (1350)	8240 (3740)	5½ (140)	22 (559)	7'-3" 1.651 m	19½ (889)	9'-4" 2.54 m	8'-0" 2.286 m	5½ (140)	28 (610)	1:2:0
60 (1500)	8730 (3960)	6 (152)	24 (610)	7'-9" 1.524 m	21½ (991)	9'-4" 2.515 m	8'-0" 2.438 m	6 (127)	-	1:1:9
66 (1650)	10710 (4860)	6½ (165)	30 (762)	8'-0" 1.829 m	23 (686)	9'-4" 2.515 m	8'-4" 2.591 m	5½ (140)	-	1:1:7
72 (1800)	12520 (5680)	7 (178)	36 (914)	8'-6" 1.981 m	23 (533)	9'-4" 2.514 m	8'-4" 2.743 m	6 (152)	-	1:1:8
78 (1950)	14370 (6700)	7½ (191)	36 (914)	7'-6" 2.286 m	21 (533)	9'-3" 2.819 m	8'-4" 2.896 m	6½ (165)	-	1:1:8
84 (2100)	18160 (8240)	8 (203)	36 (914)	7'-6.5" 2.299 m	21 (533)	9'-3.5" 2.832 m	10'-0" 3.048 m	6½ (165)	-	1:1:6

* Radius as furnished by manufacturer

GENERAL NOTES

All slope ratios are expressed as ratios of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-11	Clarified ref. to pipe dia.
	In Section A-A, Changed "knee" to "outer" cage ref.
1-1-09	Switched units to English (metric).

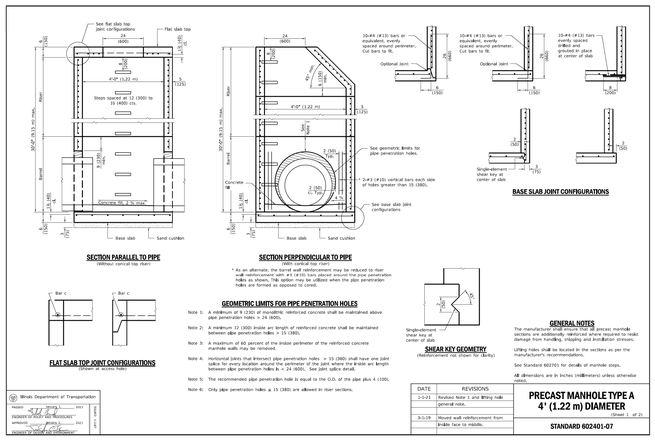
Illinois Department of Transportation

APPROVED _____ 2011
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED _____ 2011
ENGINEER OF POLICY AND PROCEDURES

PRECAST REINFORCED CONCRETE FLARED END SECTION

STANDARD 542301-03


See flat slab top joint configurations
Flat slab top
24 (600)
4'-0" (1.22 m)
Steps spaced at 12 (300) to 16 (400) ctrs.
Riser
Barrel
Concrete fill ¾ in slope
Base slab
Sand cushion
(With conical top riser)
10'-0" (3.05 m) min.
Concrete fill ¾ in slope
SECTION PARALLEL TO PIPE
(Without conical top riser)
Bar c
FLAT SLAB TOP JOINT CONFIGURATIONS
(Shown at access hole)
12-#4 (#13) bars or equivalent, evenly spaced around perimeter. Cut bars to fit.
Optional joint
Optional joint
12-#4 (#13) bars evenly spaced drilled and grouted in place at center of slab
Single element shear key at center of slab
BASE SLAB JOINT CONFIGURATIONS
See geometric limits for pipe penetration holes.
2-#3 (#10) vertical bars each side of holes greater than 15 (380).
See base slab joint configurations
SECTION PERPENDICULAR TO PIPE
(With conical top riser)
* As an alternate, the barrel wall reinforcement may be reduced to riser wall reinforcement with #3 (#10) bars placed around the pipe penetration holes as shown. This option may be utilized when the pipe penetration holes are formed as opposed to cored.
GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES
Note 1: A minimum of 9 (230) of monolithic reinforced concrete shall be maintained above pipe penetration holes = 32 (810).
Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes = 15 (380).
Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.
Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint sallot for every location around the perimeter of the joint where the R-tite arc length between pipe penetration holes is < 24 (600). See joint sallot detail.
Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).
Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.
SHEAR KEY GEOMETRY
(Reinforcement not shown for clarity)
GENERAL NOTES
The manufacturer shall ensure that all precast manhole sections are adequately reinforced where required to resist damage from handling, shipping and installation stresses.
Lifting holes shall be located in the sections as per the manufacturer's recommendations.
See Standard 602701 for details of manhole steps.
All dimensions are in inches (millimeters) unless otherwise noted.

DATE	REVISIONS
1-1-21	Revised Note 1 and lifting hole general note.
3-1-19	Moved wall reinforcement from inside face to middle.

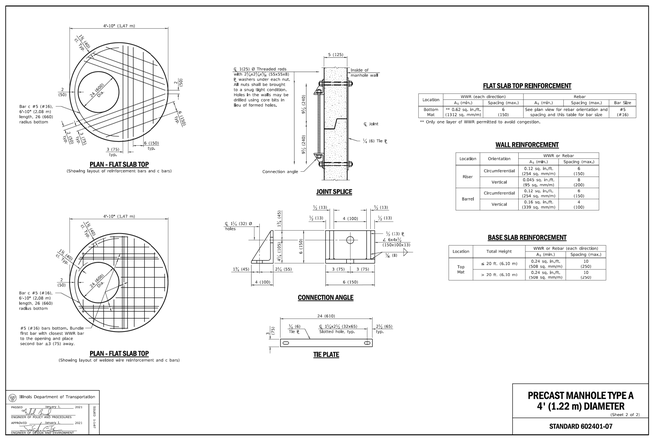
Illinois Department of Transportation

APPROVED _____ 2021
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED _____ 2021
ENGINEER OF POLICY AND PROCEDURES

PRECAST MANHOLE TYPE A 4' (1.22 m) DIAMETER
(Sheet 1 of 2)

STANDARD 602401-07



FLAT SLAB TOP REINFORCEMENT

Location	WWR (each direction)		Rebar		
	A_s (min.)	Spacing (max.)	A_s (min.)	Spacing (max.)	Bar Size
Bottom Mat	** 0.62 sq. in./ft. (1312 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and rib table for bar size		#5 (#16)

** Only one layer of WWR permitted to avoid congestion.

WALL REINFORCEMENT

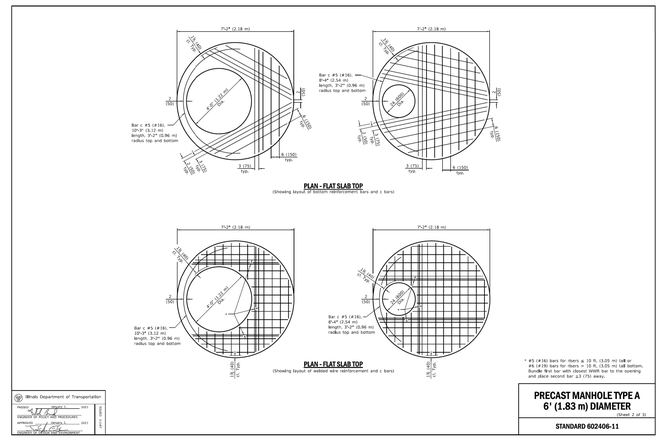
Location	Orientation	WWR or Rebar	
		A_s (min.)	Spacing (max.)
Riser	Circumferential	0.15 sq. in./ft. (318 sq. mm/m)	6 (150)
	Vertical	0.045 sq. in./ft. (95 sq. mm/m)	9 (200)
Barrel	Circumferential	0.15 sq. in./ft. (318 sq. mm/m)	6 (150)
	Vertical	0.07 sq. in./ft. (149 sq. mm/m)	6 (150)

BASE SLAB REINFORCEMENT

Location	Total Height	WWR or Rebar (each direction)
		A_s (min.)	Spacing (max.)
Top Mat	≤ 20 ft. (6.10 m)	0.24 sq. in./ft. (508 sq. mm/m)	12 (300)
	> 20 ft. (6.10 m)	0.24 sq. in./ft. (508 sq. mm/m)	12 (300)
Bottom Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)

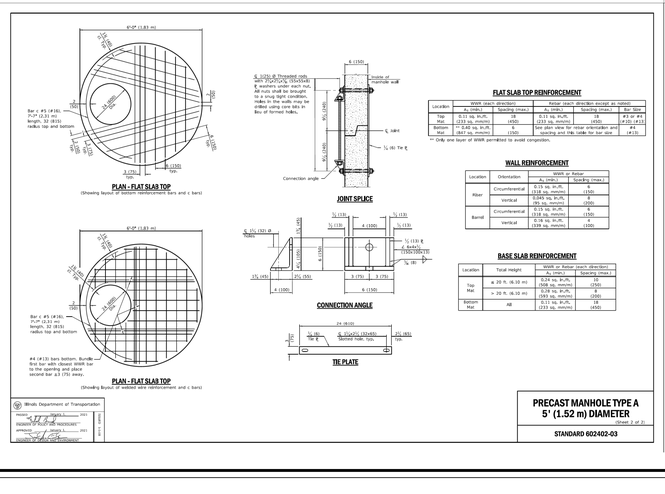
PRECAST MANHOLE TYPE A 4' (1.22 m) DIAMETER
(Sheet 2 of 2)

STANDARD 602401-07



PRECAST MANHOLE TYPE A 6' (1.83 m) DIAMETER
(Sheet 2 of 3)

STANDARD 602406-11



FLAT SLAB TOP REINFORCEMENT

Location	WWR (each direction)		Rebar (each direction except as noted)		
	A_s (min.)	Spacing (max.)	A_s (min.)	Spacing (max.)	Bar Size
Top Mat	0.31 sq. in./ft. (233 sq. mm/m)	12 (300)	0.31 sq. in./ft. (233 sq. mm/m)	18 (450)	#3 or #4 (#10 or #13)
Bottom Mat	** 0.62 sq. in./ft. (467 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and rib table for bar size		#4 (#13)

** Only one layer of WWR permitted to avoid congestion.

WALL REINFORCEMENT

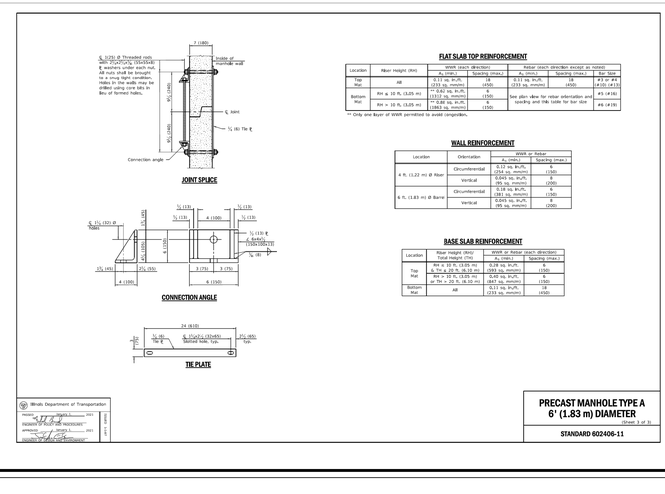
Location	Orientation	WWR or Rebar	
		A_s (min.)	Spacing (max.)
Riser	Circumferential	0.15 sq. in./ft. (318 sq. mm/m)	6 (150)
	Vertical	0.045 sq. in./ft. (95 sq. mm/m)	9 (200)
Barrel	Circumferential	0.15 sq. in./ft. (318 sq. mm/m)	6 (150)
	Vertical	0.09 sq. in./ft. (191 sq. mm/m)	6 (150)

BASE SLAB REINFORCEMENT

Location	Total Height	WWR or Rebar (each direction)
		A_s (min.)	Spacing (max.)
Top Mat	≤ 20 ft. (6.10 m)	0.24 sq. in./ft. (508 sq. mm/m)	12 (300)
	> 20 ft. (6.10 m)	0.24 sq. in./ft. (508 sq. mm/m)	12 (300)
Bottom Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)

PRECAST MANHOLE TYPE A 5' (1.52 m) DIAMETER
(Sheet 1 of 2)

STANDARD 602402-03



PRECAST MANHOLE TYPE A 6' (1.83 m) DIAMETER
(Sheet 3 of 3)

STANDARD 602406-11

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 698-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061-DET02

DATE: 01/11/20

JOB NO. 11061

SHEET **D2**
25 OF 30

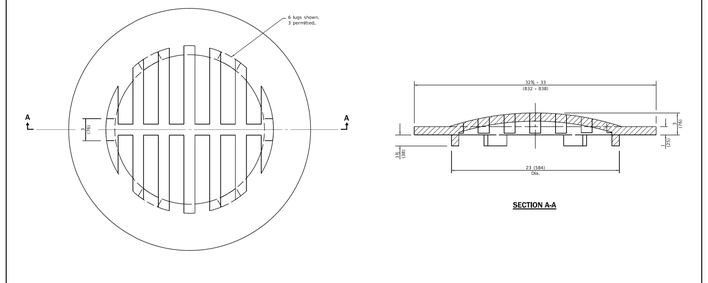
DETAIL 2

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

N:\Projects\11061\ENG\11061DET02.dgn Default User=bmcgovern



CAST GRATE

SECTION A-A

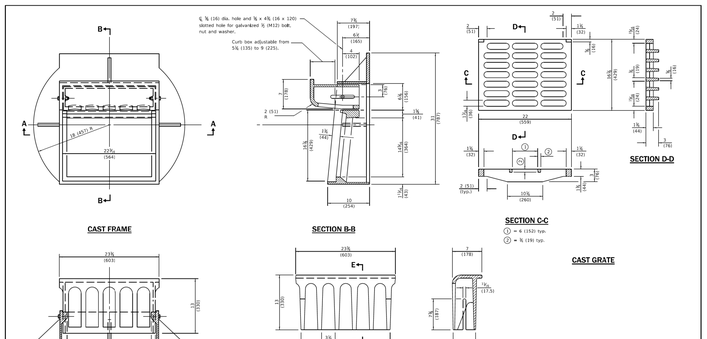
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
PASSED _____ 2019
ENGINEER OF ROUTE AND PROCEDURES
APPROVED _____ 2019
ENGINEER OF BUREAU AND PROGRAMMING

DATE	REVISIONS
1-1-15	Fareboot dimensions.
1-1-09	Switched units to English (metric).

GRATE TYPE 8

STANDARD 604036-03



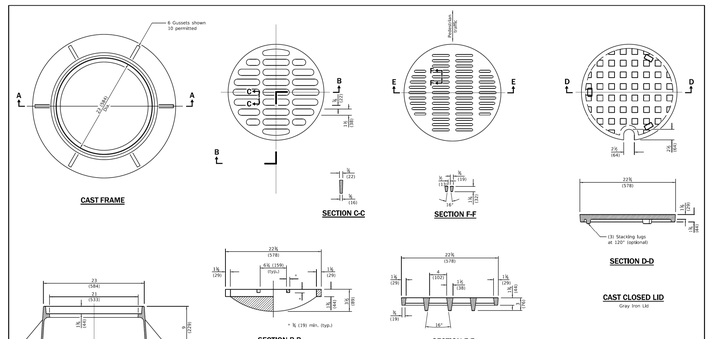
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
PASSED _____ 2019
ENGINEER OF ROUTE AND PROCEDURES
APPROVED _____ 2019
ENGINEER OF BUREAU AND PROGRAMMING

DATE	REVISIONS
1-1-15	Revised dimensions of frame and alternate curb box.
1-1-09	Switched units to English (metric).

FRAME AND GRATE TYPE 3

STANDARD 604006-05



All dimensions are in inches (millimeters) unless otherwise shown.

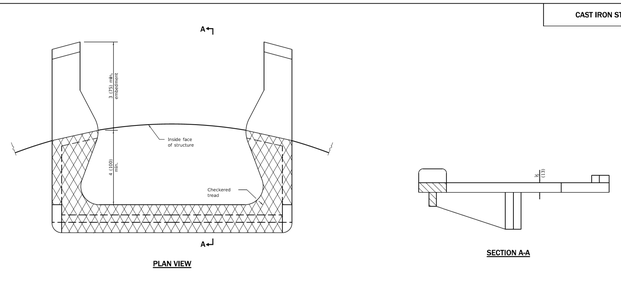
Illinois Department of Transportation
PASSED _____ 2019
ENGINEER OF ROUTE AND PROCEDURES
APPROVED _____ 2019
ENGINEER OF BUREAU AND PROGRAMMING

DATE	REVISIONS
1-1-09	Revised dimension in Section B-B of cast open lid.
1-1-15	Revised dimensioning of frame. Added ADA compliant open lid.
1-1-09	Switched units to English (metric).

FRAME AND LIDS TYPE 1

STANDARD 604001-05

CAST IRON STEPS



All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
PASSED _____ 2019
ENGINEER OF ROUTE AND PROCEDURES
APPROVED _____ 2019
ENGINEER OF BUREAU AND PROGRAMMING

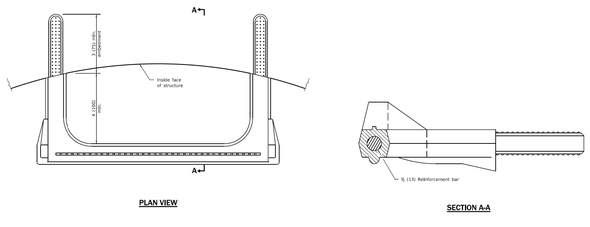
DATE	REVISIONS
1-1-09	Switched units to English (metric).
6-1-06	Revised title, drawings, and added plastic steps on sheet 2.

MANHOLE STEPS

(Sheet 1 of 2)

STANDARD 602701-02

PLASTIC STEPS



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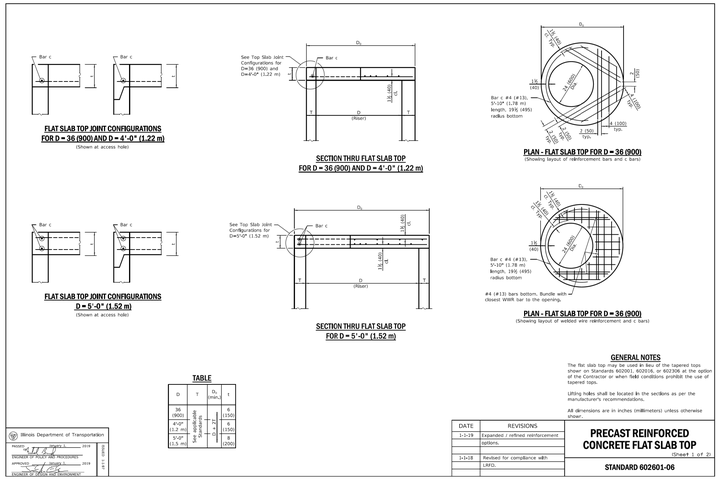
MANHOLE STEPS

(Sheet 2 of 2)

STANDARD 602701-02



TABLE

D	T	D_1 (min.)	L
36 (900)	See applicable Standard	4' – 0" (1.2 m)	6 (150)
4'-0" (1.2 m)		5' – 0" (1.5 m)	6 (150)
5'-0" (1.5 m)			6 (150)

GENERAL NOTES

The flat slab top may be used in lieu of the tapered tops shown on Standards 602001, 602016, or 602306 at the option of the Contractor or when field conditions prohibit the use of tapered tops.

Lifting holes shall be located in the sections as per the manufacturer's recommendations.

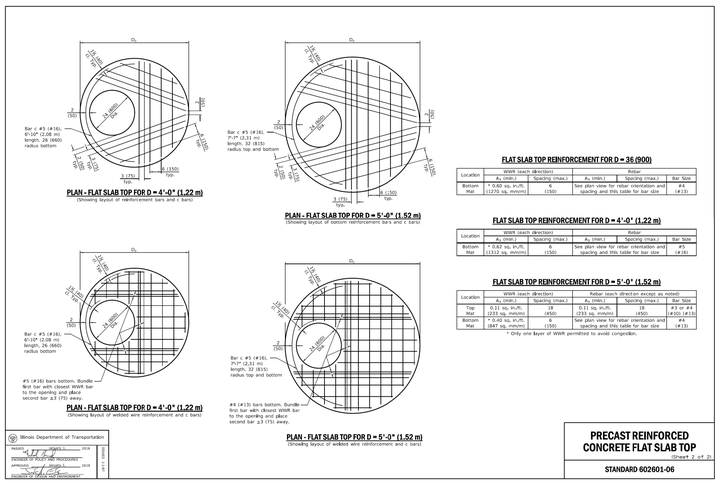
All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-19	Expanded / refined reinforcement options.
1-1-08	Revised for compliance with LRFD.

PRECAST REINFORCED CONCRETE FLAT SLAB TOP

(Sheet 1 of 2)

STANDARD 602601-06



FLAT SLAB TOP REINFORCEMENT FOR D = 36 (900)

Location	WWR (each direction)		Rebar		
	A_s (min.)	Spacing (max.)	A_s (min.)	Spacing (max.)	Bar Size
Bottom Mat	0.65 sq. in./ft. (1270 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size		#4 (#13)

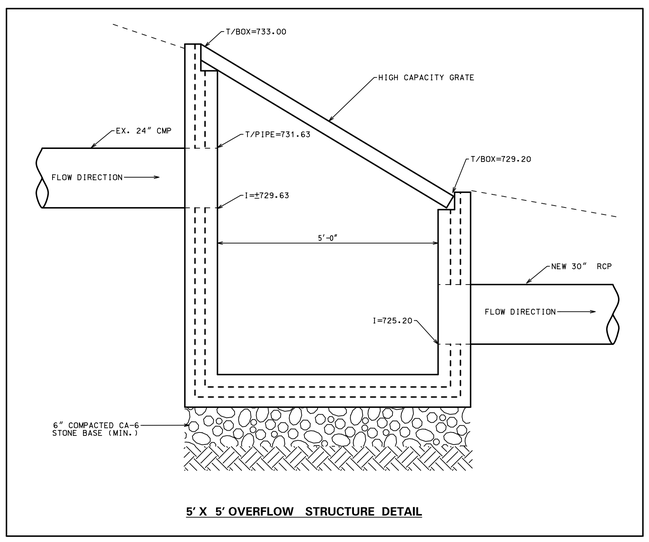
FLAT SLAB TOP REINFORCEMENT FOR D = 4'-0" (1.22 m)

Location	WWR (each direction)		Rebar		
	A_s (min.)	Spacing (max.)	A_s (min.)	Spacing (max.)	Bar Size
Bottom Mat	0.62 sq. in./ft. (1312 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size		#5 (#16)

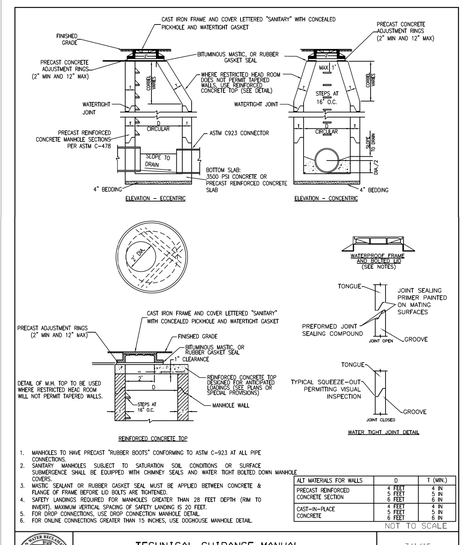
FLAT SLAB TOP REINFORCEMENT FOR D = 5'-0" (1.52 m)

Location	WWR (each direction)		Rebar (each direction except as noted)		
	A_s (min.)	Spacing (max.)	A_s (min.)	Spacing (max.)	Bar Size
Top Mat	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	#3 or #4 #10c (#13c)
Bottom Mat	0.62 sq. in./ft. (1312 sq. mm/m)	6 (150)	See plans for rebar orientation and spacing and this table for bar size		#5 (#16)

* Only one layer of WWR permitted to avoid congestion.



5' X 5' OVERFLOW STRUCTURE DETAIL



REINFORCED CONCRETE TOP

1. MANHOLES TO HAVE PRECAST "RUBBER BOOTS" CONFORMING TO ASTM C-923 AT ALL PIPE CONNECTIONS.
2. SANITARY MANHOLES SUBJECT TO SATURATION SOIL CONDITIONS OR SURFACE SUBMERGENCE SHALL BE EQUIPPED WITH CHIMNEY SEALS AND WATER TIGHT BOLTED DOWN MANHOLE COVERS.
3. MASTIC SEALANT OR RUBBER GASKET SEAL MUST BE APPLIED BETWEEN CONCRETE & FLANGE OF FRAME BEFORE LID BOLTS ARE TIGHTENED.
4. SAFETY LANDINGS REQUIRED FOR MANHOLES GREATER THAN 28 FEET DEPTH (RIM TO INVERT). MAXIMUM VERTICAL SPACING OF SAFETY LANDING IS 20 FEET.
5. FOR DROP CONNECTIONS, USE DROP CONNECTION MANHOLE DETAIL.
6. FOR ONLINE CONNECTIONS GREATER THAN 15 INCHES, USE DOGHOUSE MANHOLE DETAIL.

ALT MATERIALS FOR WALLS	D	T (MIN.)
PRECAST REINFORCED CONCRETE SECTION	4 FEET	4 IN
	5 FEET	5 IN
	6 FEET	6 IN
CAST-IN-PLACE CONCRETE	4 FEET	4 IN
	5 FEET	5 IN
	6 FEET	6 IN

NOT TO SCALE

TECHNICAL GUIDANCE MANUAL — 7/1/15

TYPICAL SANITARY MANHOLE "A" AND "B" DETAIL — STD. DWG. NO.39 — PAGE NO. 40

NO.	DATE	REMARKS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

DETAIL 3

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 698-4060 Fax: (847) 698-4065

SPACECO INC.

FILENAME: 11061-DET03

DATE: 01/11/20

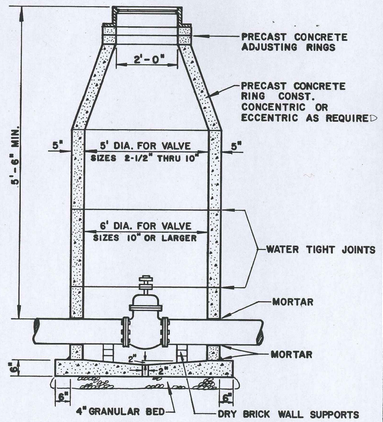
JOB NO. 11061

SHEET **D3** 26 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

VALVE VAULT

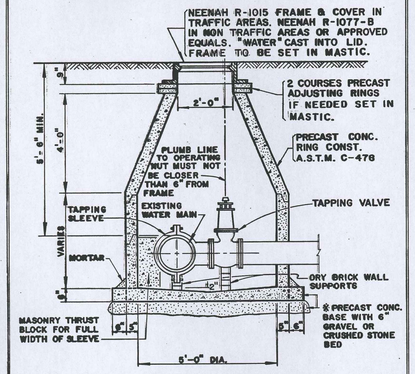
NOTE: USE NEENAH R-1077-A FRAME & COVER IN PARKWAYS AND NEENAH R-1015 FRAME & COVER IN PAVED AREAS. COVER TO BE STAMPED WATER.



N.T.S.

LTW JUNE 1982

PRESSURE CONNECTION BASIN

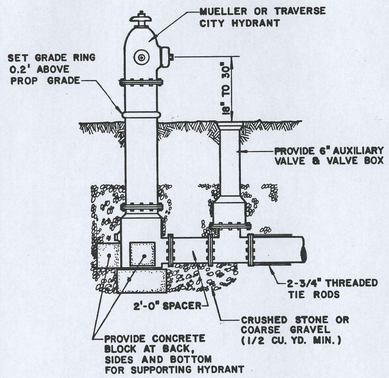


NOTES:

1. PIPE OPENINGS TO BE CAST INTO WALL.
2. IF IT IS PREFERED THAT PRECAST CONCRETE BASE BE CAST INTEGRAL WITH LOWEST WALL SECTION.
3. PRECAST SECTIONS TO BE JOINED WITH TONGUE AND GROOVE JOINTS WITH MASTIC SEALER.

01-05-94 LWU

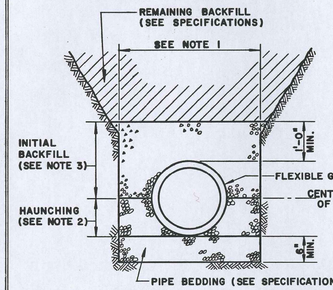
FIRE HYDRANT



N.T.S.

LTW JUNE 1982

TYPE II PIPE BEDDING



TYPICAL TRENCH CROSS-SECTION

N. T. S.

NOTES:

1. FOR TRENCH WIDTH SEE SPECIFICATIONS.
2. HAUNCHING SHALL BE GRADED COARSE SAND AND GRAVELS, GRANULAR AND NON-COHESIVE WITH MAXIMUM SIZE OF 3/4" AND NOT MORE THAN 5% PASSING NO. 200 SIEVE, COMPACT TO 80% MAXIMUM DENSITY ASTM D-1557.
3. INITIAL BACKFILL SHALL BE EITHER SAME MATERIAL AS HAUNCHING; FINE SAND, OR FINELY DIVIDED JOB EXCAVATED, SAND-CLAY OR GRAVEL-CLAY MIXTURE WITH MAXIMUM SIZE OF 3/4". COMPACT TO 80% MAXIMUM DENSITY, ASTM D-1557 IF SAME MATERIAL AS HAUNCHING; COMPACT TO 85% IF ANY OTHER MATERIAL.

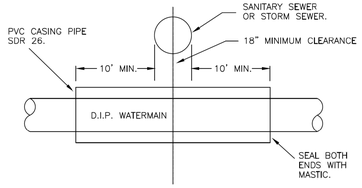
LTW JUNE 1982

WATERMAIN CONFLICTS

CONFLICTS OCCUR WHERE WATERMAINS PASS WITHIN 18" OVER OR PASS UNDER A SANITARY AND/OR STORM SEWER AND SHALL BE PROVIDED FOR AS FOLLOWS:

SANITARY SEWER CONFLICTS:

PROVIDE WATERMAIN EQUIVALENT PIPE AND JOINTS FOR THE SANITARY SEWER 10 FT. EITHER SIDE OF WATERMAIN CROSSING USING MISSION TYPE COUPLINGS TO MAKE THE TRANSITION BETWEEN THE TWO MATERIALS, OR ENCASE WATERMAIN AS SHOWN BELOW. REGARDLESS OF METHOD, THERE SHALL BE A MINIMUM 18" CLEARANCE BETWEEN TOP OF WATERMAIN AND THE BOTTOM OF THE SANITARY SEWER.

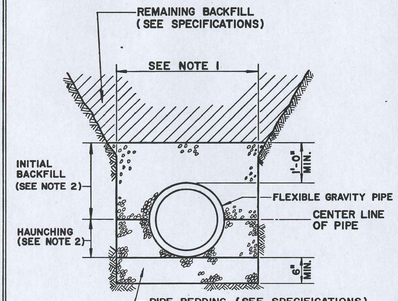


WATERMAIN DIAM.	CASING PIPE DIAM.
6"	12"
8"	15"
10"	18"
12"	18"

STORM SEWER CONFLICTS:

PROVIDE STORM SEWER PIPE WITH O-RING GASKET JOINTS CONFORMING TO ASTM C-443 10 FT. EITHER SIDE OF WATERMAIN CONFLICTS AND PROVIDE A MINIMUM CLEARANCE BETWEEN TOP OF WATERMAIN AND THE BOTTOM OF THE STORM SEWER.

TYPE I PIPE BEDDING



TYPICAL TRENCH CROSS-SECTION

N. T. S.

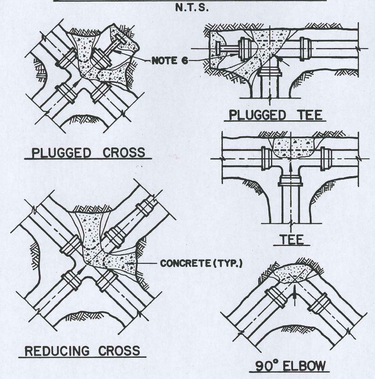
NOTES:

1. FOR TRENCH WIDTH SEE SPECIFICATIONS.
2. HAUNCHING AND INITIAL BACKFILL SHALL BE LIGHTLY COMPACTED, WELL GRADED CLEAN GRAVEL OR CRUSHED STONE WITH MAXIMUM SIZE OF 3/4", 95% PASSING 1/2" SIEVE AND NOT MORE THAN 5% PASSING NO. 4 SIEVE.

LTW JUNE 1982

STANDARD THRUST BLOCK DETAILS

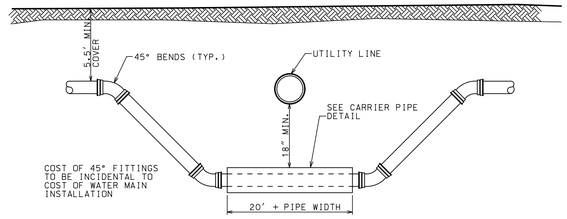
N.T.S.



NOTES:

1. ALL FITTINGS SHOWN IN PLAN.
2. ALL BLOCKS TO BE CLASS "B" CONCRETE.
3. TO DETERMINE BLOCK SIZE SEE TABLE IN SPECIFICATIONS.
4. ALL BLOCKS TO BEAR AGAINST UNDISTUBED EARTH.
5. ARROWS INDICATE DIRECTION OF THRUST.
6. 2" STD. WT. STEEL PIPE W/4"x 4"x 1/4" STEEL PLATE.

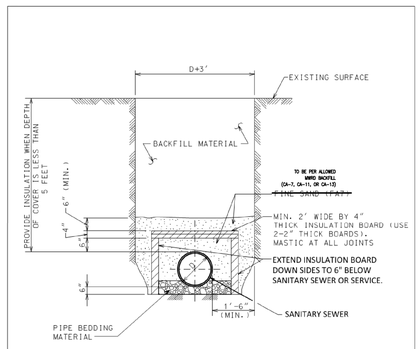
LTW JUNE 1982



WATER MAIN SET DETAIL

NOT TO SCALE

TO BE USED WHERE EXISTING UTILITY LINE CANNOT BE MOVED OR EXISTING WATER MAIN MUST BE RELOCATED TO ALLOW NEW UTILITY LINE TO BE CONSTRUCTED.



NOTES:

1. INSULATION BOARD TO BE CLOSED CELL, EXTRUDED POLYSTYRENE FOAM MEETING ASTM 578, TYPE VI, 40 PSI COMPRESSING STRENGTH (ASTM D1621) 0.1% MAX. WATER ABSORPTION (ASTM C272).
2. ~~BACKFILL MATERIAL AROUND INSULATION MUST BE FINE SAND FREE FROM ROOTS, ORGANIC MATTER, OR OTHER INJURIOUS MATERIALS.~~
3. OVERLAP ALL INSULATION BOARD JOINTS.

REV:04-07

SANITARY SEWER TRENCH INSULATION DETAIL

D-9

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

DETAIL 4

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

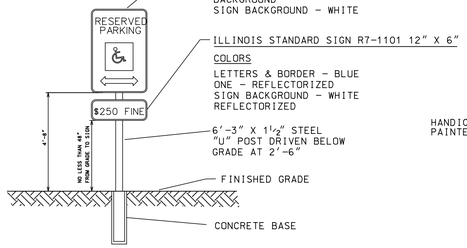
FILENAME: 11061-DET04

DATE: 01/11/20

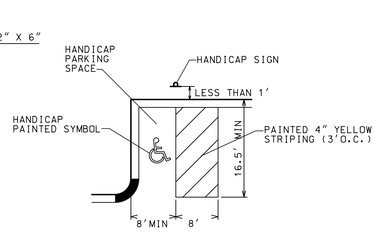
JOB NO. 11061

SHEET D4
27 OF 30

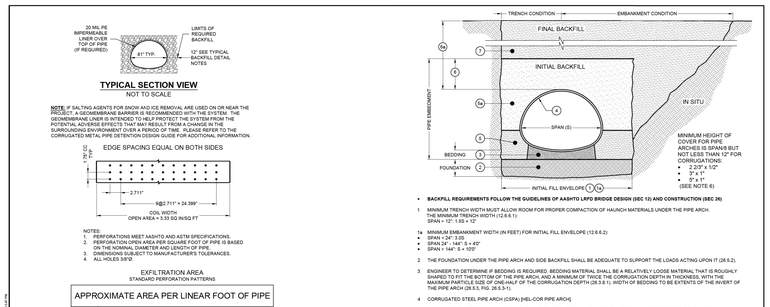
Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



ACCESSIBLE PARKING SIGN DETAIL
NOT TO SCALE



ACCESSIBLE PARKING DETAIL
NOT TO SCALE



TYPICAL SECTION VIEW
NOT TO SCALE

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

NOTES:
1. PERFORATIONS MEET AASHTO AND ASTM SPECIFICATIONS.
2. PERFORATION OPEN AREA PER SQUARE FOOT OF PIPE IS BASED ON THE NOMINAL DIAMETER AND LENGTH OF PIPE.
3. DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
4. ALL HOLES SHOWN

EXFILTRATION AREA
STANDARD PERFORATION PATTERNS

APPROXIMATE AREA PER LINEAR FOOT OF PIPE

PIPE	CORRUGATION PATTERN			
	2 2/3" x 1/2"	3" x 1"	5" x 1"	ULTRA FLO
72"Ø	73.3 SQ. IN.	77.4 SQ. IN.	76.3 SQ. IN.	

NOTES:
- GAGE AND COATING LIMITATIONS APPLY. 5" x 1" IS NOT AVAILABLE IN ALUMINUM.
- DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.

TYPICAL PERFORATION DETAIL
NOT TO SCALE

- **BACKFILL REQUIREMENTS FOLLOW THE GUIDELINES OF AASHTO LRFD BRIDGE DESIGN (SEC 12) AND CONSTRUCTION (SEC 26)**

1 MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE ARCH. THE MINIMUM TRENCH WIDTH (12.6.6.1) SPAN + 12" : 1.65 x S"

1a MINIMUM EMBANKMENT WIDTH (IN FEET) FOR INITIAL FILL ENVELOPE (12.6.6.2):
- SPAN = 24": 3.33
- SPAN 24" - 144": S + 4'0"
- SPAN > 144": S + 10'0"

2 THE FOUNDATION UNDER THE PIPE ARCH AND SIDE BACKFILL SHALL BE ADEQUATE TO SUPPORT THE LOADS ACTING UPON IT (26.6.2).

3 ENGINEER TO DETERMINE IF BEDDING IS REQUIRED. BEDDING MATERIAL SHALL BE A RELATIVELY LOOSE MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE ARCH, AND A MINIMUM OF TWICE THE CORRUGATION DEPTH IN THICKNESS, WITH THE MAXIMUM PARTICLE SIZE OF ONE-HALF OF THE CORRUGATION DEPTH (26.3.8.1). WIDTH OF BEDDING TO BE EXTENTS OF THE INVERT OF THE PIPE ARCH (26.5.3, FIG. 26.5.3-1).

4 CORRUGATED STEEL PIPE ARCH (CSPA) [HEL-COR PIPE ARCH].

5 HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION (26.5.2 & 26.5.4).

5a INITIAL BACKFILL FOR PIPE EMBEDMENT TO MEET AASHTO A-1, A-2 OR A-3 CLASSIFICATION, OR APPROVED EQUAL, COMPACTED TO 90% STANDARD PROCTOR (T 99). MAXIMUM PARTICLE SIZE NOT TO EXCEED 3" (12.4.1.2). ALL LIFTS SHALL BE PLACED IN A CONTROLLED MANNER. IT IS RECOMMENDED THAT LIFTS NOT EXCEED AN 8" UNCOMPACTED HEIGHT TO PREVENT UNEVEN LOADING, AND THE LESSER OF 1/3 THE SPAN OR 24" AS THE MAXIMUM DIFFERENTIAL SIDE-TO-SIDE (26.6.4).

6 INITIAL BACKFILL ABOVE PIPE ARCH MAY INCLUDE ROAD BASE MATERIAL (AND RIGID PAVEMENT IF APPLICABLE). THE MINIMUM COVER HEIGHT IS DEFINED IN TABLE (12.6.6.3-1)

6a TOTAL HEIGHT OF COMPACTED COVER FOR CONVENTIONAL HIGHWAY LOADS IS MEASURED FROM TOP OF PIPE ARCH TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT (12.6.6.3).

7 FINAL BACKFILL MATERIAL SELECTION AND COMPACTION REQUIREMENTS SHALL FOLLOW THE PROJECT PLANS AND SPECIFICATIONS PER THE ENGINEER OF RECORD (26.6.4.1).

NOTES:
- ENGINEER TO DETERMINE IF GEOTEXTILE SHOULD BE CONSIDERED FOR USE TO PREVENT SOIL MIGRATION INTO VARYING SOIL TYPES (PROJECT ENGINEER).
- FOR MULTIPLE BARREL INSTALLATIONS THE RECOMMENDED STANDARD SPACING BETWEEN PARALLEL PIPE ARCH RUNS SHALL BE SPAN/8 BUT NO LESS THAN 12", OR 36" FOR PIPE ARCH SPANS 100" AND LARGER. CONTACT YOUR CONTECH REPRESENTATIVE FOR NARROWER SPACING (SEE TABLE 12.6.6.7-1).

TYPICAL BACKFILL DETAIL
NOT TO SCALE

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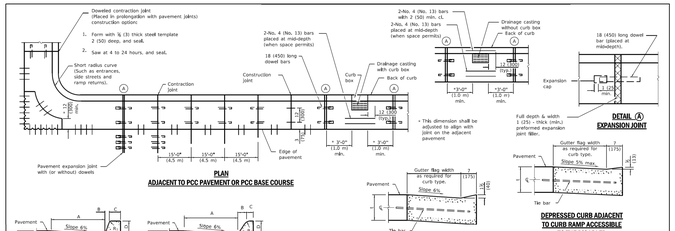
NO.	DATE	REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Ridge Road, Hanover, MD 21076
866-740-0100 FAX 740-1005 866-579-0611 FAX

CONTECH CMP DETENTION SYSTEMS
PROPOSAL DRAWING

72'Ø PERFORATED UNDERGROUND RETENTION SYSTEM - 655277-010
PALATINE CORPORATE CENTER
PALATINE, IL
SITE DESIGNATION: OVERFLOW DETENTION/CONVEYANCE

PROJECT No.	SCALE	DATE
655277	3/32	8/10/2020
DESIGNED		DRAWING
NDC		NDC
CHECKED		APPROVED
NDC		
SHEET No.	OF	SHEETS
P2	OF	4



PLAN
ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE

DETAIL (A)
EXPANSION JOINT

DEPRESSED CURB (TYPICAL)

DEPRESSED CURB ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED

BARRIER CURB

MOUNTABLE CURB

TABLE OF DIMENSIONS BARRIER CURB

TYPE	A	B	C	D	R_1	R_2
B-6.06 ▼	6	6	6	1	3	7
(B-6.12)	12	6	6	1	3	7
B-12.12	12	12	6	1	3	7
B-6.18	18	6	6	1	3	7
(B-12.18)	18	12	6	1	3	7
B-18.18	18	18	6	1	3	7
(B-6.24)	24	6	6	1	3	7
(B-12.24)	24	12	6	1	3	7
B-18.24	24	18	6	1	3	7
B-24.24	24	24	6	1	3	7

▼ For corner islands only.

TABLE OF DIMENSIONS MOUNTABLE CURB

TYPE	A	B	C	D	R_1	R_2
M-2.06	6	6	6	1	3	7
(M-6.12)	12	6	6	1	3	7
M-2.12	12	12	6	1	3	7
(M-6.18)	18	6	6	1	3	7
(M-12.18)	18	12	6	1	3	7
M-6.24	24	6	6	1	3	7
(M-12.24)	24	12	6	1	3	7
M-18.24	24	18	6	1	3	7
M-24.24	24	24	6	1	3	7

ADJACENT TO PCC BASE COURSE WITH HMA SURFACING

DOWEL BAR TABLE

PAVEMENT THICKNESS	DOWEL BAR DIAMETER
10 (250) or greater	1½ (38)
8 (200) thru 9.99 (249)	1¼ (32)
Less than 8 (200)	1 (25)

M-2.06 (M-5.15) and M-2.12 (M-5.30)

GENERAL NOTES

The bottom slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 6% when subbase is omitted.

t = Pavement thickness.

Longitudinal joint tie bars shall be No. 5 (No. 16) at 24 (600) centers in accordance with details for longitudinal construction joint shown on Standard 420001.

A minimum clearance of 2 (50) between the end of the tie bar and the back of the curb shall be maintained.

The dowel bars shown in contraction joints will only be required for monolithic construction.

See Standard 606301 for details of corner islands except reference to Standard 606001 does not apply.

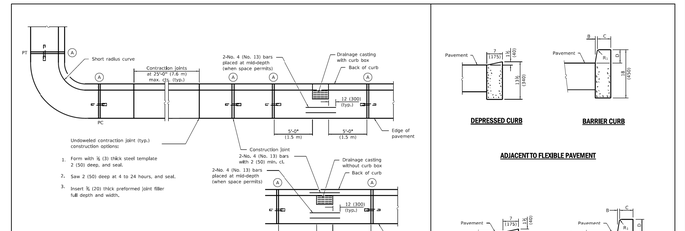
All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-3-18	New standard.

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
Sheet 1 of 2

B.L.R. 28

Illinois Department of Transportation
APPROVED ____ DATE ____
ENGINEER OF LOCAL ROADS AND STREETS
APPROVED ____ DATE ____
ENGINEER OF BUREAU OF TECHNOLOGY



PLAN

ON DISTURBED SUBGRADE

ON UNDISTURBED SUBGRADE

ADJACENT TO FLEXIBLE PAVEMENT

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

B.L.R. 28

Illinois Department of Transportation
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ENGINEER OF LOCAL ROADS AND STREETS
APPROVED ____ DATE ____
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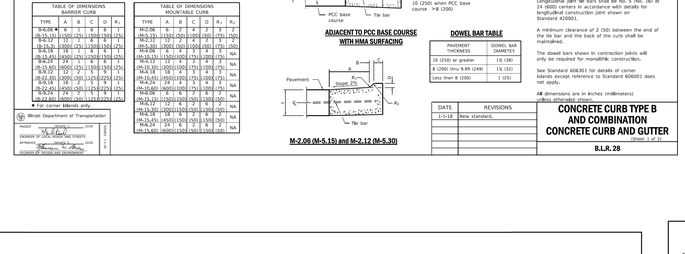

PLAN
ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE

DETAIL (A)
EXPANSION JOINT

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B-24.24	24	24	6	1	3	7

▼ For corner islands only.

TABLE OF DIMENSIONS MOUNTABLE CURB

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ADJACENT TO PCC BASE COURSE WITH HMA SURFACING

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DATE	REVISIONS
1-3-18	New standard.

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
Sheet 1 of 2

B.L.R. 28

Illinois Department of Transportation
APPROVED ____ DATE ____
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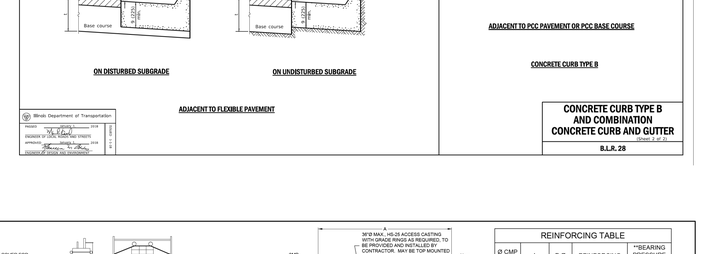

PLAN

ON DISTURBED SUBGRADE

ON UNDISTURBED SUBGRADE

ADJACENT TO FLEXIBLE PAVEMENT

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

B.L.R. 28

Illinois Department of Transportation
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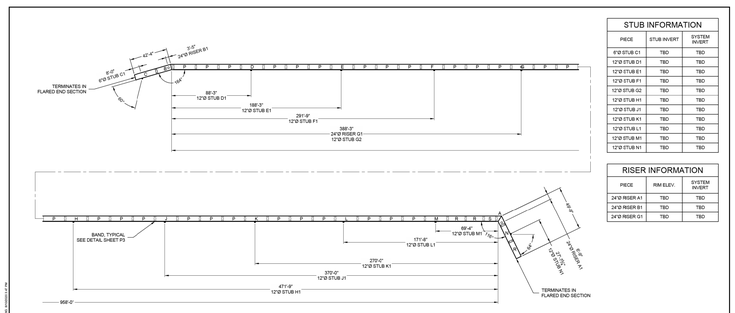

STUB INFORMATION		
PIECE	STUB INVERT	SYSTEM INVERT
6'Ø STUB C1	TBD	TBD
12'Ø STUB D1	TBD	TBD
12'Ø STUB E1	TBD	TBD
12'Ø STUB F1	TBD	TBD
12'Ø STUB G2	TBD	TBD
12'Ø STUB H1	TBD	TBD
12'Ø STUB J1	TBD	TBD
12'Ø STUB K1	TBD	TBD
12'Ø STUB L1	TBD	TBD
12'Ø STUB M1	TBD	TBD
12'Ø STUB N1	TBD	TBD

RISER INFORMATION		
PIECE	RIM ELEV.	SYSTEM INVERT
24"Ø RISER A1	TBD	TBD
24"Ø RISER B1	TBD	TBD
24"Ø RISER G1	TBD	TBD

THE UNDERSIGNED HEREBY APPROVES THE ATTACHED (4) PAGES INCLUDING THE FOLLOWING:
- **PIPE STORAGE = 27,379 CF**
- **MAINLINE PIPE GAGE = 12**
- **WALL TYPE = PERFORATED**
- **DIAMETER = 72"**
- **ARCH SPAN = 81"**
- **FINISH = ALT2**
- **CORRUGATION = 5x1**

CUSTOMER ____ DATE ____

ASSEMBLY
SCALE: 1" = 50'
PIPE STORAGE: 27,379 CF
STRUCTURAL BACKFILL STORAGE: 7,183 CF
TOTAL STORAGE PROVIDED: 34,563 CF
VOLUME CONTROL PROVIDED: 825 CF
LOADING: H20
PIPE INV. = VARIES'±

NOTES
- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
- ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD (EOR) PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE 25' x 3" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE AS REQUIRED, BY CONTRACTOR.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO STRUCTURES, FOR CONNECTING SECTIONS OF PIPE TOGETHER IN THE FIELD, OR FOR NORMAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL ACCESS CASTINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE NOT SUPPLIED BY CONTECH.

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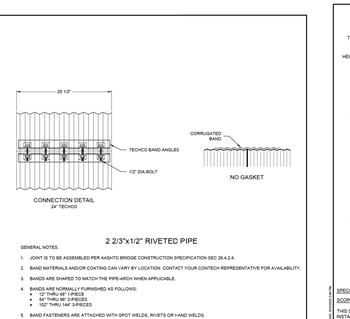
866-740-0100 FAX 740-1005 866-579-0611 FAX

CONTECH CMP DETENTION SYSTEMS
PROPOSAL DRAWING

72'Ø PERFORATED UNDERGROUND RETENTION SYSTEM - 655277-010
PALATINE CORPORATE CENTER
PALATINE, IL
SITE DESIGNATION: OVERFLOW DETENTION/CONVEYANCE

PROJECT No.	SCALE	DATE
655277	3/32	8/10/2020
DESIGNED		DRAWING
NDC		NDC
CHECKED		APPROVED
NDC		
SHEET No.	OF	SHEETS
P1	OF	4



2 2/3"x1/2" RIVETED PIPE

GENERAL NOTES:
1. JOINT IS TO BE ASSEMBLED PER AASHTO BRIDGE CONSTRUCTION SPECIFICATION SEC 26.4.2.4.
2. BAND MATERIALS AND/OR COATING CAN VARY BY LOCATION. CONTACT YOUR CONTECH REPRESENTATIVE FOR AVAILABILITY.
3. BANDS ARE SHAPED TO MATCH THE PIPE-ARCH WHEN APPLICABLE.
4. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
   - 12" THRU 48" 1-PIECE
   - 54" THRU 96" 2-PIECE
   - 102" THRU 144" 3-PIECES
5. BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS.
6. ALL CMP IS REROLLED TO HAVE ANNULAR END CORRUGATIONS OF 2 2/3"x1/2"
7. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
8. ORDER SHALL DESIGNATE GASKET OPTION, IF REQUIRED (SEE DETAILS ABOVE).

10-C BAND DETAIL
NOT TO SCALE

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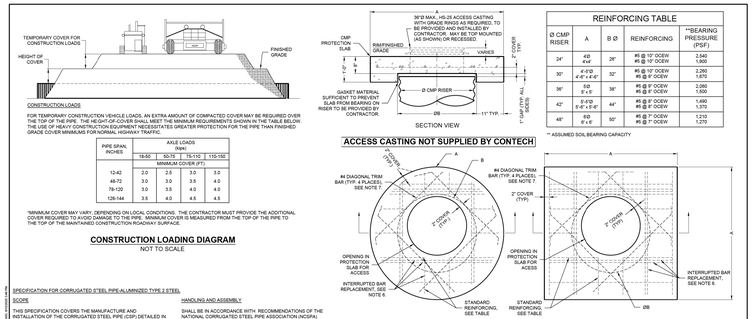


CONSTRUCTION LOADING DIAGRAM
NOT TO SCALE

SPECIFICATION FOR CORRUGATED STEEL PIPE-ALUMINIZED TYPE 2 STEEL

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE CORRUGATED STEEL PIPE (CSP) DETAILED IN THE PROJECT PLANS.

MATERIAL
THE ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M36 OR ASTM A929.

PIPE
THE CSP SHALL BE MANUFACTURED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF AASHTO M36 OR ASTM A760. THE PIPE SIZES, GAGES AND CORRUGATIONS SHALL BE AS SHOWN ON THE PROJECT PLANS.

ALL FABRICATION OF THE PRODUCT SHALL OCCUR WITHIN THE UNITED STATES.

HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF THE NATIONAL CORRUGATED STEEL PIPE ASSOCIATION (NCSPA).

INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II OR ASTM A798 AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

MATERIAL SPECIFICATION
NOT TO SCALE

REINFORCING TABLE				
Ø CMP RISER	A	B Ø	REINFORCING	**BEARING PRESSURE (PSF)
24"	4'Ø 4'x4'	26"	#5 @ 10" OCEW #5 @ 10" OCEW	2,540 1,900
30"	4'Ø 4'x4'x4'-6"	32"	#5 @ 10" OCEW #5 @ 9" OCEW	2,260 1,670
36"	6'Ø 5'x5'	38"	#5 @ 9" OCEW #5 @ 8" OCEW	2,060 1,500
42"	5'-6"Ø 5'x5'x5'-6"	44"	#5 @ 8" OCEW #5 @ 7" OCEW	1,490 1,370
48"	6'Ø 6'x6'	50"	#5 @ 7" OCEW #5 @ 7" OCEW	1,210 1,270

** ASSUMED SOIL BEARING CAPACITY

ACCESS CASTING NOT SUPPLIED BY CONTECH

NOTES:
1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION AND ASI 300.
2. DESIGN LOAD: H525.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 4,000 psi

A. REFERENCED SPECIFICATIONS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS;
   * STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT SS) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   * STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   * VILLAGE OF PALATINE MUNICIPAL CODE;
   * THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD) WATERSHED MANAGEMENT ORDINANCE AND TECHNICAL GUIDANCE MANUAL;
   * IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

B. NOTIFICATIONS

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055).
2. THE VILLAGE OF PALATINE ENGINEERING DEPARTMENT AND PUBLIC HUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK. CONTRACTOR SHALL DETERMINE ITEMS REQUIRING INSPECTION PRIOR TO START OF CONSTRUCTION OR EACH WORK PHASE.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

C. GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR IS -0.0 FT.
2. MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.
3. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.
4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.
5. THE LOCATION OF VARIOUS UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.
6. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
7. MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.
8. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.
9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.
10. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, 8-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

D. SANITARY SEWER

1. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.
2. A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.
3. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.
4. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).
5. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
6. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.
7. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
VITRIFIED CLAY PIPE	ASTM C-700	ASTM C-425
REINFORCED CONCRETE SEWER PIPE	ASTM C-76	ASTM C-443
CAST IRON SOIL PIPE	ASTM A-74	ASTM C-564
DUCTILE IRON PIPE	ANSI A21.51	ANSI A21.11
POLYVINYL CHLORIDE (PVC) PIPE 6-INCH TO 15-INCH DIAMETER SDR 26 18-INCH TO 27-INCH DIAMETER F/DY=46	ASTM D-3034 ASTM F-679	ASTM D-3212 ASTM D-3212
HIGH DENSITY POLYETHYLENE (HDPE)	ASTM D-3350 ASTM D-3035	ASTM D-3261,F-2620 (HEAT FUSION) ASTM D-3212,F-477 (GASKETED)
WATER MAIN QUALITY PVC 4-INCH TO 36-INCH 4-INCH TO 12-INCH 14-INCH TO 48-INCH	ASTM D-2241 AWWA C900 AWWA C905	ASTM D-3139 ASTM D-3139 ASTM D-3139

THE FOLLOWING MATERIALS ARE ALLOWED ON A QUALIFIED BASIS SUBJECT TO DISTRICT REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE. A SPECIAL CONDITION WILL BE ADDED TO THE PERMIT WHEN THE PIPE MATERIAL BELOW IS USED FOR SEWER CONSTRUCTION OR A CONNECTION IS MADE.

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
POLYPROPYLENE (PP) PIPE		
12-INCH TO 24-INCH DOUBLE WALL	ASTM F-2736	D-3212, F-477
30-INCH TO 60-INCH TRIPLE WALL	ASTM F-2764	D3212, F-477

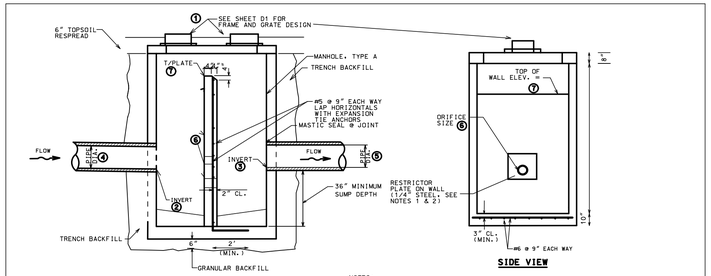
8. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE ¼ " TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO ¼ THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-7, CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.
9. NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.
10. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.
11. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
    a) A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SHEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUBWYE-SADDLE OR HUB-TEE SADDLE.
    b) REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
    c) WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.
12. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
13. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
14. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.
15. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THAT CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.
16. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.
17. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.
18. A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCES SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

E. EROSION AND SEDIMENT CONTROL

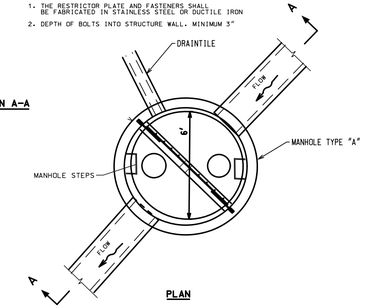
1. THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
2. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.
3. ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
   a) UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBANCE.
   b) ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
6. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
7. A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
8. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INVOLVING CONCRETE.
9. MORTAR WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ADDITION TO CONCRETE WASHOUT FACILITIES FOR ANY BRICK AND MORTAR BUILDING ENVELOPE CONSTRUCTION ACTIVITIES.
10. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN. VOLUME CONTROL FACILITIES SHALL NOT BE USED AS TEMPORARY SEDIMENT BASINS.
12. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) DAYS.
13. ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).
14. VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
15. SOIL STOCKPILES SHALL, AT A MINIMUM, BE PROTECTED WITH PERIMETER SEDIMENT CONTROLS. SOIL STOCKPILES SHALL NOT BE PLACED IN FLOOD PROTECTION AREAS OR THEIR BUFFERS.
16. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.
17. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.
18. THE CONTRACTOR SHALL EITHER REMOVE OR REPLACE ANY EXISTING DRAIN TILES AND INCORPORATE THEM INTO THE DRAINAGE PLAN FOR THE DEVELOPMENT. DRAIN TILES CANNOT BE TRIBUTARY TO A SANITARY OR COMBINED SEWER. DRAIN TILES ALLOWED IN COMBINED SEWER AREA FOR GREEN INFRASTRUCTURE PRACTICES.
19. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE SITE INSPECTOR MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
20. THE CONTRCTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMAINS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGE TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM.
21. ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.
22. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED ON A YEAR-ROUND BASIS DURING CONSTRUCTION AND ANY PERIODS OF CONSTRUCTION SHUTDOWN UNTIL PERMANENT STABILIZATION IS ACHIEVED.
23. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.
24. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, SITE INSPECTOR, OR MWRD.

TECHNICAL GUIDANCE MANUAL — 07/12/2016

MWRD GENERAL NOTES — STD. DWG. NO.18 — PAGE NO. 19



NOTES:
1. THE RESTRICTOR PLATE AND FASTENERS SHALL BE FABRICATED IN STAINLESS STEEL OR DUCTILE IRON
2. DEPTH OF BOLTS INTO STRUCTURE WALL, MINIMUM 3"

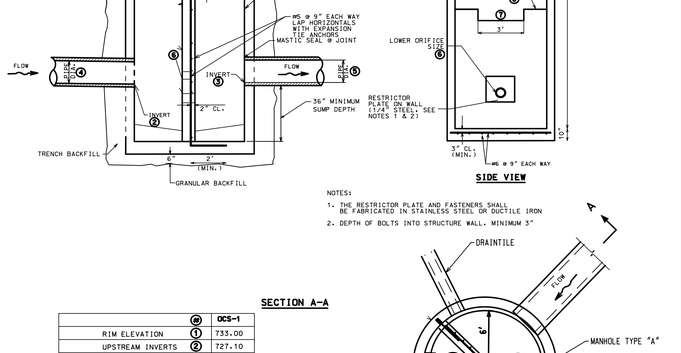


SECTION A-A

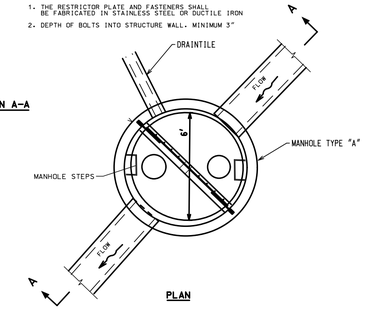
		OCS-1
RIM ELEVATION	1	731.20
UPSTREAM INVERTS	2	723.20
DOWNSTREAM INVERT	3	722.60
UPSTREAM PIPE DIAMETER	4	12"
DOWNSTREAM PIPE DIAMETER	5	12"
100-YEAR ORIFICE SIZE	6	8.70"
100-YEAR ORIFICE ELEVATION		722.60
100-YEAR HIGH WATER LEVEL (TOP OF WALL ELEV.)	7	729.20

OUTLET CONTROL STRUCTURE, TYPE A – OCS-1 (BASINS A & C)

NOT TO SCALE



NOTES:
1. THE RESTRICTOR PLATE AND FASTENERS SHALL BE FABRICATED IN STAINLESS STEEL OR DUCTILE IRON
2. DEPTH OF BOLTS INTO STRUCTURE WALL, MINIMUM 3"

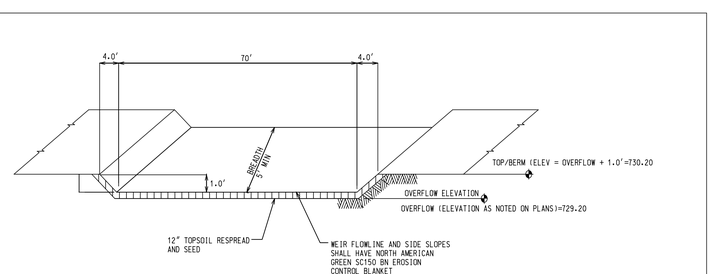


SECTION A-A

		OCS-1
RIM ELEVATION	1	733.00
UPSTREAM INVERTS	2	727.10
DOWNSTREAM INVERT	3	726.00
UPSTREAM PIPE DIAMETER	4	12"
DOWNSTREAM PIPE DIAMETER	5	12"
100-YEAR LOWER ORIFICE SIZE	6	8.50"
100-YEAR LOWER ORIFICE ELEVATION		726.00
100-YEAR UPPER ORIFICE SIZE & ELEVATION (3' WIDE X 0.3' HEIGHT)	7	730.80
100-YEAR HIGH WATER LEVEL (TOP OF WALL ELEV.)	8	731.10

OUTLET CONTROL STRUCTURE, TYPE A – OCS-2 (BASIN B)

NOT TO SCALE



EMERGENCY OVERFLOW WEIR BASIN C

NOT TO SCALE

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

DETAIL 6

PALATINE CORPORATE CENTER
200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065
SPACECO INC.

FILENAME: 11061-DET06
DATE: 01/11/20
JOB NO. 11061
SHEET D6
29 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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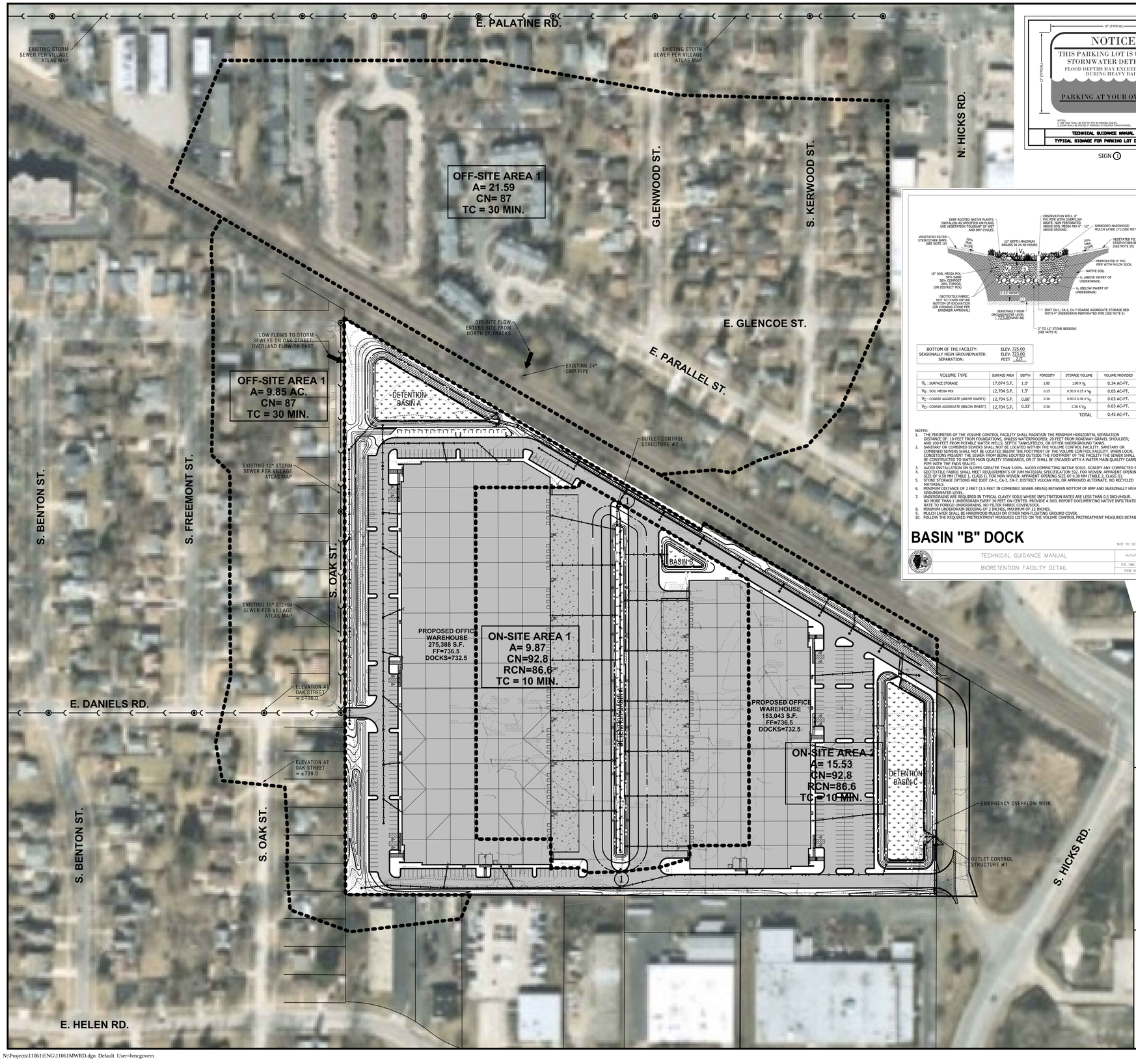
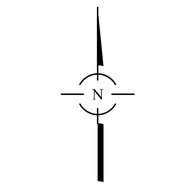


SIGN 1



BOTTOM OF THE FACILITY:	ELEV. 725.00
SEASONALLY HIGH GROUNDWATER:	ELEV. 723.00
SEPARATION:	FEET 2.0'

VOLUME TYPE	SURFACE AREA	DEPTH	POROSITY	STORAGE VOLUME	VOLUME PROVIDED
V_A : SURFACE STORAGE	17,074 S.F.	1.0'	1.00	1.00 X V_A	0.34 AC-FT.
V_B : SOIL MEDIA MIX	12,704 S.F.	1.5'	0.25	0.50 X 0.25 X V_B	0.05 AC-FT.
V_C : COARSE AGGREGATE (ABOVE INVERT)	12,704 S.F.	0.66'	0.36	0.50 X 0.36 X V_C	0.03 AC-FT.
V_D : COARSE AGGREGATE (BELOW INVERT)	12,704 S.F.	0.33'	0.36	0.36 X V_D	0.03 AC-FT.
				TOTAL	0.45 AC-FT.

NOTES:
1. THE PERIMETER OF THE VOLUME CONTROL FACILITY SHALL MAINTAIN THE MINIMUM HORIZONTAL SEPARATION DISTANCE OF: 10-FEET FROM FOUNDATIONS, UNLESS WATERPROOFED; 20-FEET FROM ROADWAY GRAVEL SHOULDER; AND 100-FEET FROM POTABLE WATER WELLS, SEPTIC TANKS/FIELDS, OR OTHER UNDERGROUND TANKS.
2. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED WITHIN THE VOLUME CONTROL FACILITY. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED BELOW THE FOOTPRINT OF THE VOLUME CONTROL FACILITY. WHEN LOCAL CONDITIONS PREVENT THE SEWER FROM BEING LOCATED OUTSIDE THE FOOTPRINT OF THE FACILITY THE SEWER SHALL BE CONSTRUCTED TO WITHSTAND MAIN QUALITY STANDARDS, OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH WELDED ENDS SEALED.
3. AVOID INSTALLATION ON SLOPES GREATER THAN 3.00%. AVOID COMPACTING NATIVE SOILS. SCARIFY ANY COMPACTED SOIL.
4. GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF 3UM MATERIAL SPECIFICATION 592. FOR WOVEN: APPARENT OPENING SIZE OF 0.50 MM (TABLE 1, CLASS I). FOR NON WOVEN: APPARENT OPENING SIZE OF 0.30 MM (TABLE 2, CLASS II).
5. STONE STORAGE OPTIONS ARE IDOT CA-1, CA-3, CA-7, DISTRICT VULCAN MIX, OR APPROVED ALTERNATE. NO RECYCLED MATERIALS.
6. MINIMUM DISTANCE OF 2 FEET (3.5 FEET IN COMBINED SEWER AREAS) BETWEEN BOTTOM OF BMP AND SEASONALLY HIGH GROUNDWATER LEVEL.
7. UNDERDRAINS ARE REQUIRED IN TYPICAL CLAYEY SOILS WHERE INFILTRATION RATES ARE LESS THAN 0.5 INCH/HOUR. NO MORE THAN 1 UNDERDRAIN EVERY 30 FEET ON CENTER. PROVIDE A SOIL REPORT DOCUMENTING NATIVE INFILTRATION RATE TO FOREGO UNDERDRAINS. MINIMUM SLOPE OF 0.5%.
8. MAXIMUM STONE BEDDING OF 2 INCHES. MAXIMUM 6" OF 12 INCHES.
9. MULCH LAYER SHALL BE HARDWOOD MULCH OR OTHER NON-FLOATING GROUND COVER.
10. FOLLOW THE REQUIRED PRETREATMENT MEASURES LISTED ON THE VOLUME CONTROL PRETREATMENT MEASURES DETAIL.

BASIN "B" DOCK

NOT TO SCALE

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BIORETENTION FACILITY DETAIL	STD. DWG. NO.1
	PAGE NO.1

MWRD SUMMARY

LEGEND

- PERVIOUS AREA
- IMPERVIOUS AREA
- NATIVE PLANTINGS
- DRAINAGE AREA

DETAINED AREA CURVE NUMBER CALCULATIONS:

CN TRIBUTARY TO BASINS= 93.80

CN ADJUSTED= 86.60

TIME OF CONCENTRATION CALCULATIONS:

TC TRIBUTARY TO BASINS= 10.0 MIN (URBAN)

RELEASE RATE SUMMARY:

ALLOWABLE FLOW PER WMO ORDINANCE = 5.08 CFS (0.20 CFS/ACRE)

100 YEAR PEAK RELEASE RATE = 5.04 CFS

DETENTION SUMMARY:

VOL BASIN A = 2.26 AC-FT
VOL BASINS B = 0.96 AC-FT
VOL BASIN C = 4.57 AC-FT

SURFACE STORAGE = 7.79 AC.-FT

PIPE STORAGE = 0.94 AC-FT
DOCKS = 1.29 AC.-FT

TOTAL VOLUME PROV'D = 10.02 AC-FT

DETENTION REQUIRED = 9.52 AC-FT (PEAK 18-HR)

BMP VOLUME SUMMARY:

BELOW BASIN A STORAGE = 0.41 AC-FT
BELOW BASINS B STORAGE = 0.39 AC-FT
BELOW BASIN C STORAGE = 0.68 AC-FT
BASIN B SOIL MEDIA/CORAGE AGG. = 0.11 AC-FT

VOLUME CONTROL PROVIDED = 1.59 AC-FT

VOLUME CONTROL REQUIRED = 1.58 AC-FT

ON-SITE AREA SUMMARY:

TOTAL PROPERTY OWNERSHIP = 25.40 AC.

EXISTING PERVIOUS AREA = 5.26 AC.
EXISTING IMPERVIOUS AREA = 20.14 AC.

TOTAL DEVELOPMENT AREA = 25.40 AC.

ON-SITE AREA TRIBUTARY TO BASINS = 25.40 AC.

PROPOSED IMPERVIOUS AREA = 19.0 AC.
PROPOSED PERVIOUS AREA = 4.80 AC.
PROPOSED NATIVE PLANTINGS = 1.60 AC.

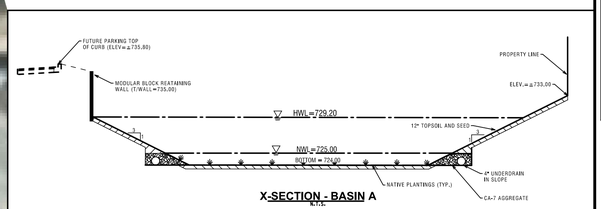
OFF-SITE AREA SUMMARY:

TOTAL UPSTREAM AREA = 31.44 AC.

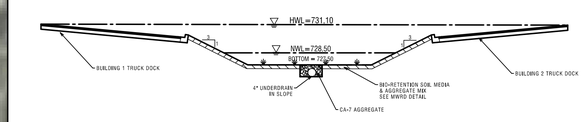
CURVE NUMBER (1/4 ACRE LOT) = 87.0 (ASSUMED)
TIME OF CONCENTRATION (TC) = 30.0 MIN (URBAN)

TOTAL 100 YEAR PEAK OVERLAND FLOW = 202.49 CFS

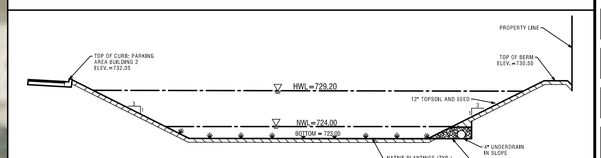
TOTAL PROVIDED EMERGENCY OVERFLOW WEIR = 210.0 CFS



X-SECTION - BASIN A
N.T.S.



X-SECTION - BASIN B
N.T.S.



X-SECTION - BASIN C
N.T.S.

NO.	DATE	REMARKS

NO.	DATE	REMARKS
1	01/22/20	ISSUE FOR PERMIT

MWRD DRAINAGE EXHIBIT

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061-PDP

DATE: 01/11/20

JOB NO. 11061

SHEET MWRD
30 OF 30

Attachment: Final Engineering Plans (200, 300, and 350 E. Daniels Road, & S. Sellstrom Dr. - FPD, PFS, RZ)

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SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

FINAL STORMWATER MANAGEMENT REPORT

FOR

PALATINE CORPORATE CENTER

PALATINE, IL

Prepared For:

MIDWEST INDUSTRIAL FUNDS
OAK BROOK, IL

Prepared By:
SPACECO, Inc.
9575 W. Higgins Road, Suite 700
Rosemont, IL 60018
PH: 847-696-4060
Contact: Daniel C. Stevens, P.E.

SPACECO PROJ #:	11061
ORIGINAL DATE:	January 2021
LAST REVISED:	

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

6 **Soil Erosion and Sediment Control Requirements**

Narrative Description

7 **Floodplain Requirements**

(Not applicable – no floodplain area)

8 **Wetland/Buffer Requirements**

Submittal Done by Others

9 **Riparian Requirements**

(Not applicable – no riparian area)

10 **Maintenance & Monitoring Submittals**

M & M Narrative

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

TAB 1

STORMWATER MANAGEMENT PERMIT APPLICATION
FOR
PALATINE CORPORATE CENTER
PALATINE, COOK COUNTY, IL

PREPARED FOR
PANATTONI DEVELOPMENT COMPANY

PREPARED BY
SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018

SPACECO PROJECT # 11061

JANUARY 2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Applicant	Reviewer			Stormwater Submittal Requirements	WMO Reference
Check if Provided	Check if Required	Check if Provided	Status		
✔				**Review Fee = $**	
✔				**Deposits = $**	
General Stormwater Information					
✔				Maps, exhibits, and plan sheet(s) specified under the *Maps, Exhibit, and Plan Sheets Submittal Checklist*	§303.1, §308.5
✔				Narrative description of existing site conditions	§303.2(A)
✔				Narrative description of proposed site conditions	§303.2(B)
✔				Narrative description of upstream tributary area	§303.2(C)
✔				Identification of development in combined or separate sewer area	§303.2(B)
Site Runoff Requirements					
✔				Documentation identifying the procedures, assumptions, and data used to size minor and major stormwater system	§303.2(D)
				Documentation identifying the procedures, assumptions, and data used to calculate on-site depressional storage	
✔				Stage-storage-discharge relationship for onsite depressional storage	
✔				Time of concentration calculations for existing and proposed conditions	§303.2(D)
✔				Curve number calculations for existing and proposed site conditions	§303.2(D)
✔				Calculations for sizing storm sewer system	§303.2(D), §502.5
✔				Delineation of tributary areas to minor stormwater system, major stormwater system, and stormwater detention facility	§303.2(D), §502.6
✔				Hydraulic grade line and water surface elevations under both design and base flood conditions	§303.2(D)
✔				Buildings elevated to Flood Protection Elevation (FPE)	§303.2(D), §502.14
✔				Calculations for sizing overland flow routes	§303.2(D), §502.6
✔				Cross-section data for open channels	§303.2(D)
✔				Profile drawings	§303.2(D)
				Assumptions or calculations utilized to determine tailwater conditions for the site	§303.2(D)
Site Volume Control Requirements					
✔				Narrative description of the utilization of the volume control practice hierarchy	§303.3(D)
✔				Existing soils description, including:	§303.3(C)
✔				Infiltration rate	§303.3(C)
✔				Percentage of clay	§303.3(C)
✔				Seasonal groundwater elevation	§303.3(C)
✔				Calculation of the proposed impervious area for the development	§303.3(A), §503.2
✔				Calculation of required volume control storage for the development	§303.3(A), §503.2
✔				Narrative description of the proposed volume control practices	§303.3(D)
✔				Calculations quantifying storage provided in proposed volume control practice	§303.3(E), §503.3(A)
				Calculations quantifying volume control treated by flow-through practices	§303.3(F), §503.3(B)
				For redevelopments:	§303.3(G), §503.3(C)
				Demonstration that site limitations prevent the development from providing the entire volume control storage onsite (if applicable)	§503.3(C)
				Calculation of the impervious area reduction (if applicable)	§503.3(C)

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Applicant	Reviewer			Stormwater Submittal Requirements	WMO Reference
Check if Provided	Check if Required	Check if Provided	Status		
Site Detention Requirements					
✔				Documentation identifying the procedures, assumptions, and data used to calculate hydrologic and hydraulic conditions and to determine the post-development allowable release rate and related storage volume	§303.4(D)
✔				Narrative description of proposed site conditions	§303.2(A)
✔				Narrative description of upstream tributary area	§303.2(C)
✔				Identification of development in combined or separate sewer area	§303.2(A)
✔				Completed Schedule D	
✔				Site Detention Facility Calculations:	§303.4
✔				Curve number reduction calculations based on volume control storage provided onsite	§303.2(D), §504.8
✔				Delineation of unrestricted areas and calculation of 100-year, 24-hour unrestricted release rates	§504.6
✔				Calculation of allowable release rate, accounting for any existing depressional storage and/or unrestricted releases from the site	§504.2, §504.3, §504.4, §504.5, §504.7
✔				Elevation versus storage curve and calculations	§303.4(B)
✔				Elevation versus discharge curve and calculations	§303.4 (C)
✔				Hydrologic model input/output (for event hydrograph methods, must be TR-20, HEC-1, or HEC-HMS)	§504.9
✔				CD-ROM containing hydrologic model input/output (for event hydrograph methods, must be TR-20, HEC-1, or HEC-HMS)	§504.9
				Detention nomograph calculation (if applicable)	§504.7
				Delineation of upstream tributary areas and calculation of bypass flow	§504.10
✔				Calculations demonstrating detention facility overflow structure and overland flow path have sufficient capacity	§303.4(C), §504.11(C)
				Assumptions or calculations utilized to determine tailwater conditions for the site	§303.4(D), §504.13(B)
				For redevelopments tributary to existing detention facility:	
				Verification of existing storage volume	§505.3(A)
✔				Volume control storage provided	§505.3(A)
				Documentation of SPO Permit for original development	§505.3(B)
✔				Calculation of proposed runoff coefficent	§505.3(B)
				Modified rational method calculations using Bulletin 70 rainfall depths (if applicable)	§505.3(B)

Applicant	Reviewer			Maps, Exhibits and Plan Sheets Submittal Requirements	WMO Reference
Check if Provided	Check if Required	Check if Provided	Status		
Stormwater Management Facility Plan Sheets					
✔				Existing conditions plan sheet(s)	308.5(A)
✔				Utility and geometry plan sheet(s)	308.5(B)
✔				Grading plan sheet(s)	308.5(C)
Qualified Sewer Construction Plan Sheets					
✔				Utility plan sheet(s)	§308.6(A)
✔				The plan and profile for public qualified sewer main construction	§308.6(B)
				The lift station plan, profile, and schematic	§308.6(C)
Wetland/Buffer Plan Sheets					
				In plan view, the location of wetland and wetland buffer on or within 100 feet of the site, based upon a survey of the wetland delineation	§308.7(A)
				Acreage of proposed impact to wetland or wetland buffer	§308.7(B)
				A proposed wetland mitigation plan, if wetland or wetland buffer impacts are proposed	§308.7(C)
Riparian Environment Plan Sheets					
				Location of riparian environments located on site, based upon a survey of the Ordinary High Water Mark (OHWM) of the channel or stream and associated riparian environment, in plan view	§308.8(A)
				Acreage and area of proposed impact to riparian environments	§308.8(B)
				Proposed riparian environment mitigation plan, if riparian mitigation is required	§308.8(C)
Recording Plan Sheets					
✔				Location of all existing and proposed detention facilities to meet District stormwater storage requirements and to ensure they are permanently sustained and adequately maintained by future parcel owners	§308.9(A)
✔				Location of any offsite, trade-off detention facilities to meet District stormwater storage requirements not located on the parcel and to ensure they are linked to the permitted parcel development and permanently sustained and adequately maintained by future/alternate parcel owners	§308.9(B)
✔				Location of all existing and proposed volume control practices to meet District volume control requirements and to ensure they are permanently sustained and adequately maintained by future parcel owners	§308.9(C)
✔				Entire parcel area for phased development providing notice of stormwater detention storage requirements for undeveloped portions of a parcel now developed in part under the WMO	§308.9(D)
✔				A sewer utility plan for parcels outside of a municipality delineating any qualified sewer construction to be maintained by the co-permittee in the event that the Township or County is unwilling or unable to do so	§308.9(E)
✔				Location of all wetland and riparian mitigation areas provided to meet District mitigation requirements and to ensure they are permanently sustained and adequately maintained by future parcel owners	§308.9(F)
✔				Location of all native or natural planting areas to ensure they are permanently sustained and remain as native or natural planting areas by future parcel owners	§308.9(G)
✔				Location of all qualified sewer construction for parcels in unincorporated areas, to ensure sewer systems are permanently sustained and adequately maintained by future parcel owners in the event the permittee (township or other non municipal entity) is unable to do so	§308.9(H)

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROJECT NARRATIVE

INTRODUCTION

This report summarizes the stormwater management plan for the proposed industrial development located in Palatine, Cook County, Illinois. The project site is located at 200 East Daniels Road, as shown on Exhibit 7 in Tab 2. The total site area is 25.4 acres. The stormwater analysis was performed based on the proposed plan prepared by the project architect, the topographic survey prepared by Spaceco, Inc., and Site Engineering in accordance with the requirements of the Watershed Management Ordinance (Ordinance) as adopted by the Metropolitan Water Reclamation District of Greater Chicago on May 1, 2014 and as amended to, and including May 26, 2020.

Property Address	200 East Daniels Road Palatine, IL 60067
P.I.N.	02-23-114-010-0000,02-23-114-021-0000, 02-23-114-022-0000, 02-23-114-034-0000, 02-23-114-035-0000, 02-23-114-036-0000, 02-23-114-037-0000, 02-23-114-038-0000, 02-23-114-039-0000

EXISTING CONDITIONS

The project site is a 3-parcel subdivision. Under existing conditions, it is comprised of three industrial buildings compromising of about 447,361 square feet with driveways and parking lot areas.

There is no regulatory floodplain and no special flood hazard areas located on the site per the Flood Insurance Rate Maps (FIRM) 17031C0181J with an effective date of August 19, 2008. A partial copy of the FIRM panel is included as Exhibit 5 under Tab 2.

There is off-site area tributary to the site. See the detailed existing drainage plan and MWRD Exhibit included as Exhibit 9 &10 under Tab 2.

The project is located in a separate sewer area.

The site has been previously developed and graded. There are no indications that wetlands exist on-site based on NWI Exhibit 6 under Tab 2.

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROPOSED CONDITIONS

The proposed development consists of two industrial buildings (approximately 429,066 square-feet) and surrounding parking infrastructure with stormwater detention improvements.

General Stormwater Information

Stormwater detention will consist of three native planted basins located on the proposed site. Surface storage will be provided, located between the buildings in the truck dock areas and storage in pipes.

Site Runoff Requirements

The project is located in a separate sewer area, and the site will discharge into the existing storm sewer along Sellstrom Drive at the east property line.

There is upstream area tributary and is a total area of 31.44 acres. The area to the north is conveyed by an existing 24" CMP that will discharge into proposed detention basin. The area to west will only convey to the 100 year overland flow through our site. Please MWRD Exhibit included as Exhibit 10 under Tab 2.

An arch pipe will be installed to connect all detention basins and convey the on-site and off-site drainage through the site.

Tab 3 of the report includes detailed calculations Curve Number (CN), and detailed storm sewer calculations. Restrictor will be installed to meet the run-off requirements and overflow systems will be in place.

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Storm Sewer Design Criteria

Stormwater Studio Version 3.0.0.21 was used to size the storm sewers and determine the Hydraulic Grade Line and water surface elevations. Calculations can be found in Tab 3.

- Rainfall Return Period: 10-Year – Conveyance in Pipe (Unless noted)
- Peak Discharge Method: Rational Formula, Q=CIA
- Computer Software: Stormwater Studio For Windows By Hydrology Studio
- Rainfall Intensity: MWRD Technical Guidance Manual
- Runoff Coefficient:
  - Impervious area: C = 0.95
  - Pervious area: C = 0.50
  - Composite C = 0.90
  - Inlet Time: **10 Minutes**
- Pipe Capacity: Use Manning's equation for full pipe flow capacity. Use n = 0.013 for RCP.

Site Volume Control Requirements

As a basis of this design, volume control storage was calculated for all proposed impervious area on the site.

Volume Control Summary Table

Site Condition	Area		
	Tributary Impervious (Acre)	Retention Volume (1") Req'd (ac-ft)	Retention Volume Provided (ac-ft)
Project Site	19.0	1.58	1.59 (1)

Volume control provided Notes:

1) For the Volume control provided in the proposed basins and in the soil media stone voids. A 4" under drain will be provided to ensure that water does not permanently retain water in the basins.

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Site Detention Storage Requirements

Detention volume will be required for the entire site per the criteria of the WMO.

On-Site Area Summary Table

	Area Description			
Area	On-Site Disturbed Area Acre	Native Plantings Unrestricted Acre	Unrestricted Area Acre	Area Detained Acre
Project Site	25.4	0.00	0.00	25.4

Detention storage required for the site is based on the total site area tributary to the basins with a 100-year allowable release rate of 0.20 cfs/acre as required by Ordinance.

Detention storage was analyzed using a HEC-HMS hydrologic model with Bulletin 75 and Huff Quartile Distribution to demonstrate that the required storage and allowable release rates will be met for the tributary area. The Runoff Curve Number (CN) was determined based on the proposed land cover type (pervious or impervious).

Detention Volume Required Summary Table

	Detention Area (ac.)	Curve Number (CN)	Reduced CN	100 year Volume Required (ac-ft)	100 year Volume Provided (ac-ft)
Detained Area 1	9.87	92.8	86.60	1.76	2.25
Detained Area 2	15.53	92.8	86.60	7.76	7.77
Total	25.40	92.8	86.60	9.52	10.02 (1)

Detention Provided Notes:

1) For the detention volume it will be provided in the native planted detention basins, surface storage in the proposed dock areas, and storage in oversized pipes.

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Site Release Requirements

The WMO requires a restricted release rate and storage volumes were based on these rates.

Release Rate Summary Table

Areas (ac.)			Flows (cfs)		
Area	Total Area	Gross Allowable Release Rate @ 0.20 cfs/acre	Unrestricted Release Rate 100 yr-24hr	Unrestricted Native Planting 100 yr-24hr	Allowable Peak Release Rate
Project Site	25.40	5.08	0.00	0.00	5.08

A stage- discharge table was also prepared for the detention facility based on the total tributary area to the basins and the unrestricted area. The downstream overall site restrictor was sized based calculated release rate.

Upstream Restrictor Summary Table

	Type	Size (inches)	Secondary Restrictor in Weir Wall (width)	Actual Peak Release @ HWL (cfs)
OCS-2/Basin B	Bolted Plate	8.5”	3’	4.74

Overall Total Site Restrictor Summary Table

	Type	Size (inches)	Actual Peak Release @ HWL (cfs)
OCS-1/Basin C	Bolted Plate	8.7”	5.04

Hydrologic input parameters for the HEC-HMS models are included in Tab 5. An overflow structure is sized to convey the 100-Year peak inflow rate of to the basins. The location of the emergency overflow weir id detailed on the engineering plans and shown on the MWRD exhibit

Overflow Weir Summary Table

	Areas (acres)			Flows (cfs)	
	On-Site	Off-Site	Total	Required	Provided
Basin C	25.4	31.44	56.84	202.49	210.00

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

TAB 2

STORMWATER MANAGEMENT PERMIT APPLICATION
FOR
PALATINE CORPORATE CENTER
PALATINE, COOK COUNTY, IL

PREPARED FOR
PANATTONI DEVELOPMENT COMPANY

PREPARED BY
SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018

SPACECO PROJECT # 11061

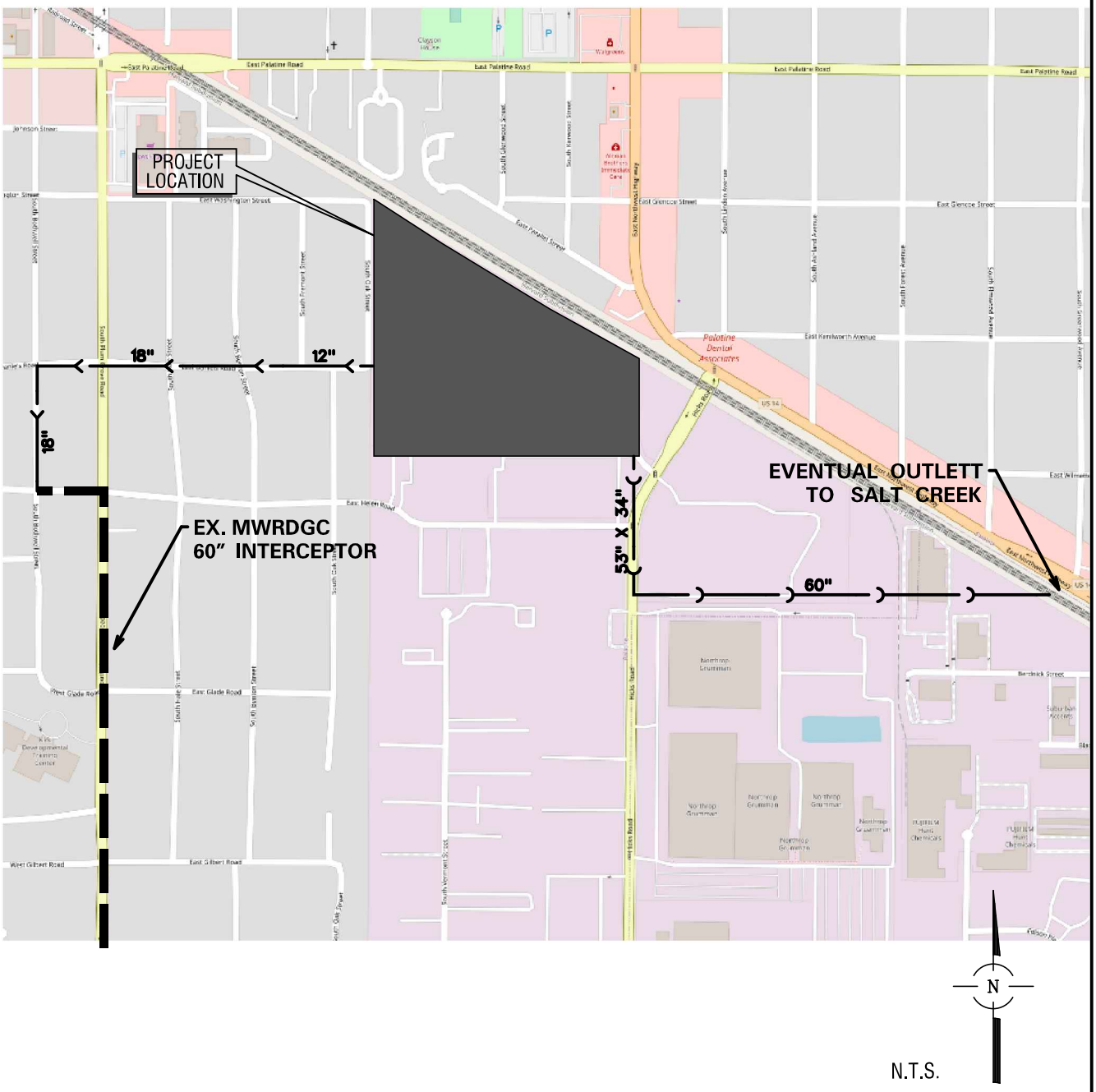
JANUARY 2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

LOCATION MAP

(WITH SEWER MAP)



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Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

EXHIBIT TITLE: USGS MAP
DESCRIPTION: PALATINE QUADRANGLE

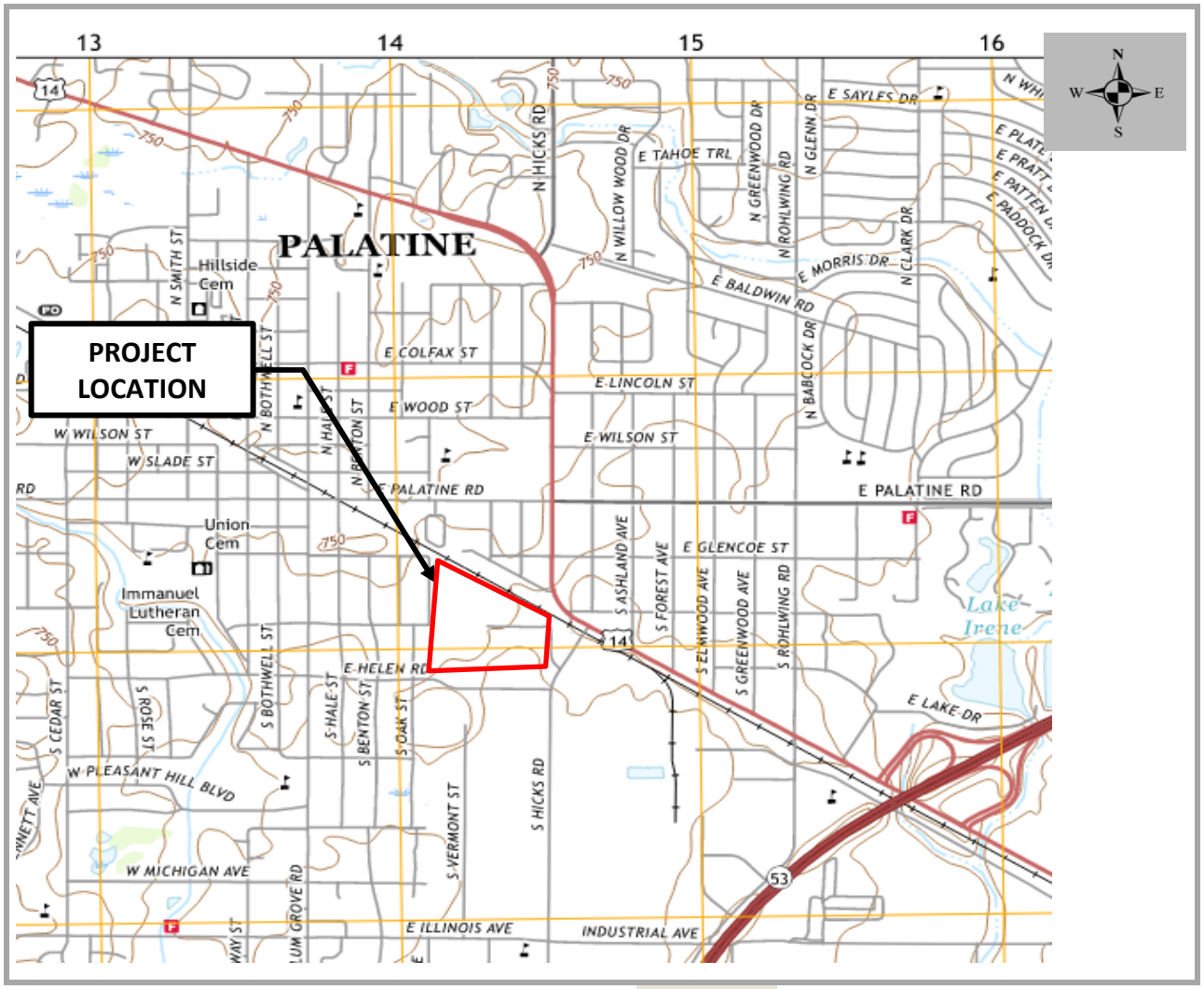

EXHIBIT # 3

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

EXHIBIT TITLE: NRCS SOIL MAP
DESCRIPTION: EXISTING URBAN SOIL TYPE

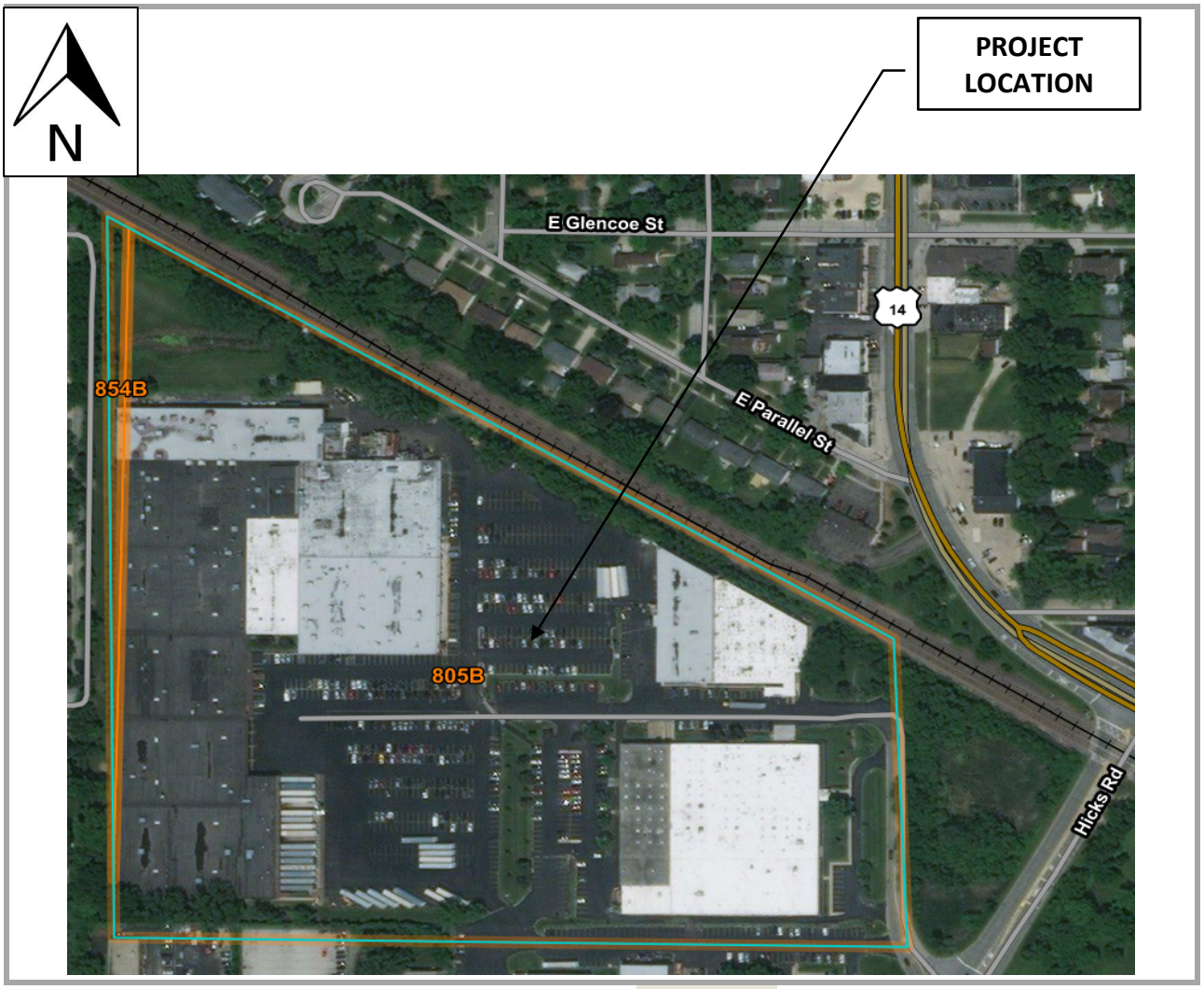

EXHIBIT # 4

MAJOR SOIL TYPES:
805B, 854B

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

EXHIBIT TITLE: FEMA MAP
DESCRIPTION: MAP NUMBERS 17031C0181J

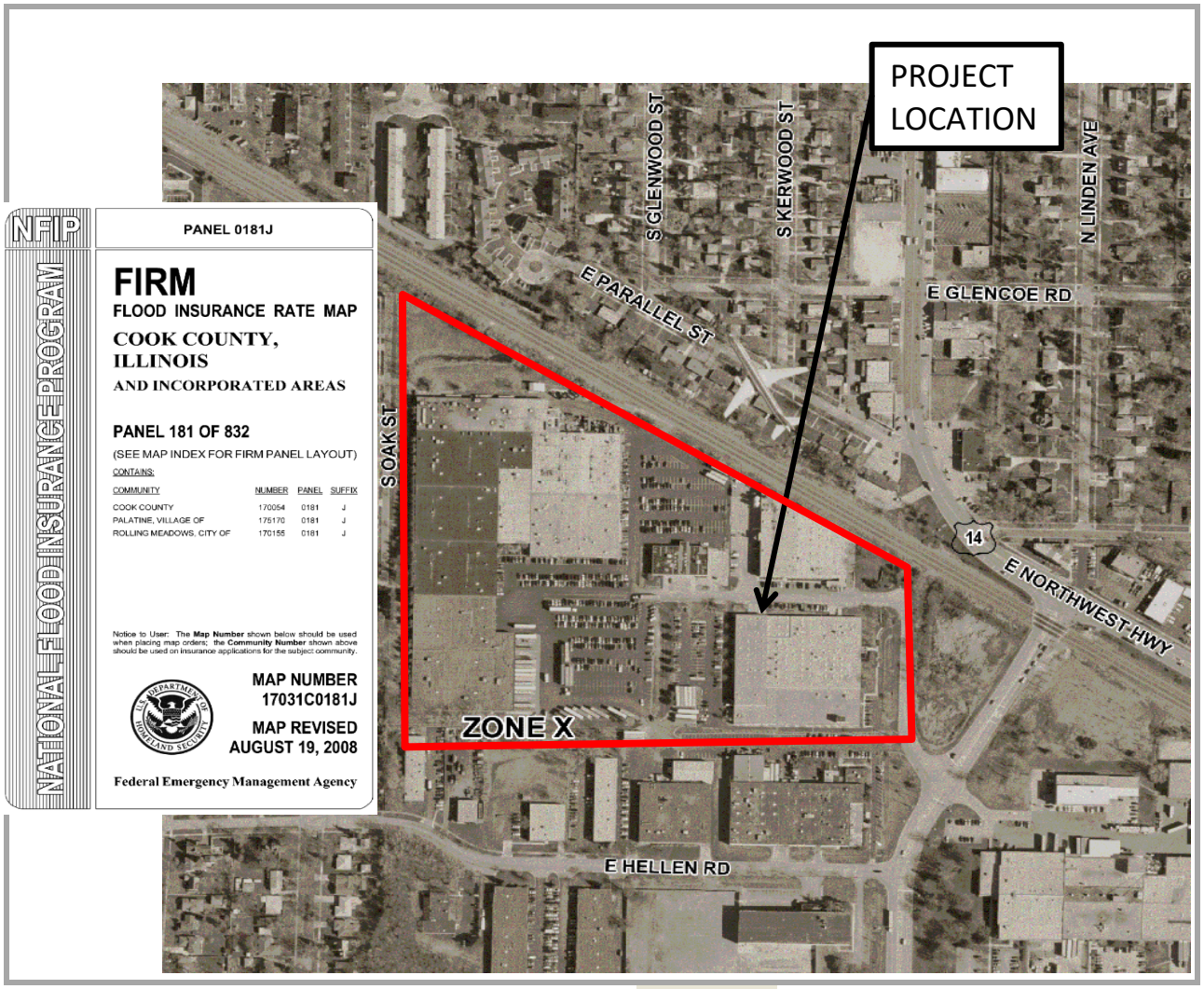

EXHIBIT # 5

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

EXHIBIT TITLE: NATIONAL WETLAND INVENTORY MAP
DESCRIPTION: URBAN LAND ONLY

EXHIBIT # 6

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

EXHIBIT TITLE: AERIAL MAP
DESCRIPTION: NEARMAP IMAGE

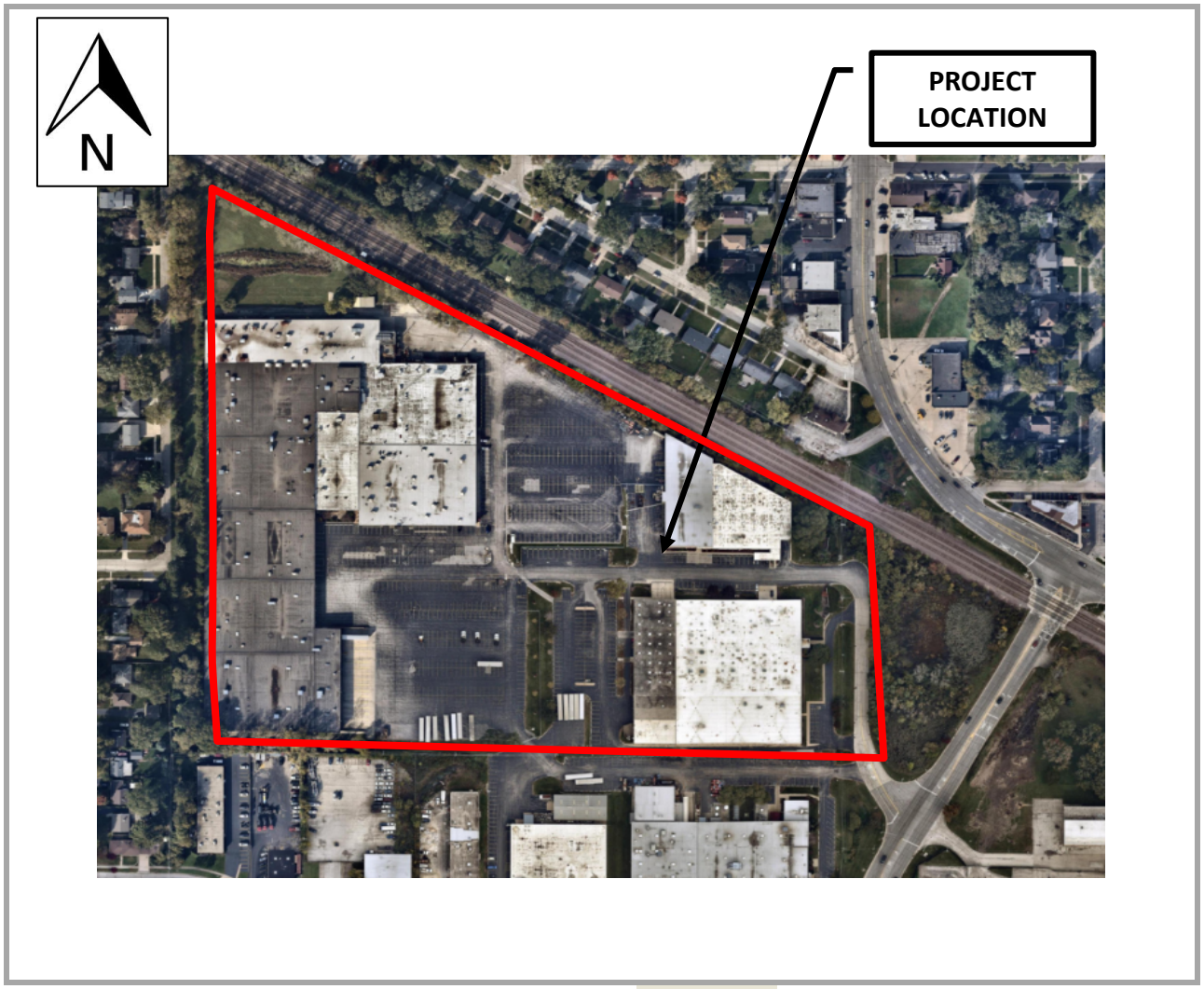

EXHIBIT # 7

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

June 15, 2020
L-91,211

TESTING SERVICE CORPORATION

Corporate Office
360 S. Main Place, Carol Stream, IL 60188-2404
630.462.2600 • Fax 630.653.2988

Local Offices:
457 E. Gundersen Drive, Carol Stream, IL 60188-2492
630.653.3920 • Fax 630.653.2726

650 N. Peace Road, Suite D, DeKalb, IL 60115-8401
815.748.2100 • Fax 815.748.2110

1350 TriState Parkway, Unit 122, Gurnee, IL 60031-9135
847.249.6040 • Fax 844.767.4721

2235 23RD Avenue, Rockford, IL 61104-7334
815.394.2562 • Fax 815.394.2566

203 Earl Road, Suite A, Shorewood, IL 60404-9446
815.744.1510 • Fax 815.744.1728

Geotechnical & Environmental Engineering

Construction Materials Engineering & Testing

Laboratory Testing of Soils, Concrete & Asphalt

Geo-Environmental Drilling & Sampling

Report of Soils Exploration

Phase 1 - Detention Basins

New Office/Warehouses

200 E. Daniels Road

Palatine, Illinois

Prepared For:

Midwest Industrial Funds

1211 W. 22nd Street, Suite 410

Oak Brook, Illinois 60523

GEOTECHNICAL GROUP

Local Office
June 15, 2020

TESTING SERVICE CORPORATION

Local Office:
457 E. Gundersen Drive, Carol Stream, IL 60188-2492
630.653.3920 ● Fax 630.653.2726

Corporate Office:
360 S. Main Place, Carol Stream, IL 60188-2404
630.462.2600 ● Fax 630.653.2988

Mr. John Dunneback
Midwest Industrial Funds
1211 W. 22nd Street, Suite 410
Oak Brook, Illinois 60523

RE: L-91,211
Phase 1 - Detention Basins
New Office/Warehouses
200 E. Daniels Road
Palatine, Illinois

Dear Mr. Dunneback:

This report presents results of a soils exploration performed for a Phase 1 investigation in Palatine, Illinois. These geotechnical engineering services are being provided in accordance with TSC Proposal No. 64,744 dated March 20, 2020 and the attached General Conditions, incorporated herein by reference.

The approximate 26-acre site is located at 200 E. Daniels Road. It is bordered by the UP-NW Metra Line along the north. It currently consists of several office/warehouse buildings with associated pavements, to be demolished to make way for new construction. The site slopes down gently from the center with ground surface elevations at the boring locations ranging from approximate Elevations 729 to 734.

Preliminary plans call for the construction of two (2) office/warehouse buildings with footprints of 276,703 sf and 154,037 sf. The proposed buildings will presumably consist of 1 to 2-story slab-on-grade structure, with top of finished floor (FF) preliminarily set at Elevation 736.5, i.e. approximately 2 feet above existing grade. Loading docks are planned on the interior long sides of the buildings with parking and drive areas along the perimeter of the property.

Finally, the focus of the current study is the three (3) detention basins located around the site. Their general locations, high water level and normal water levels (HWL & NWL) are listed in the following table:

Detention Basin	General Location	HWL	NWL
A	Northwest Corner	729.0	725.0
B	Central	---	728.0
C	East	729.0	724.0

Field Investigation and Laboratory Testing

Nine (9) soil borings were performed as part of our study. A Boring Location Plan is attached showing the drilling layout. Ground surface elevations at the boring locations were acquired by TSC using a Trimble R8s GNSS receiver which uses the North American Vertical Datum 1988 (NAVD88), being rounded to the nearest 0.5 foot.

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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The borings were extended 15 to 20 feet below existing grade. Borings 1 - 6 were drilled in the detention areas and Borings 7 - 9 performed in proposed building areas. They were drilled and samples tested in accordance with currently recommended American Society for Testing and Materials specifications. Soil sampling was performed at 2½-foot intervals to a depth of 15 feet and at 5-foot intervals below 15 feet. The samples were taken in conjunction with the Standard Penetration Test (SPT), for which driving resistance to a 2" split-spoon sampler (N-value in blows per foot) provides an indication of the relative density of granular materials and consistency of cohesive soils. Water level readings were taken during and following completion of drilling operations, with the boreholes then immediately backfilled for safety reasons and those located in pavement areas patched at the surface.

Soil samples from the soil borings were examined in the laboratory to verify field descriptions and to classify them in accordance with the Unified Soil Classification System. Laboratory testing included moisture content determinations for all cohesive and intermediate (silt or loamy) soil types. An estimate of unconfined compressive strength was obtained for all cohesive materials using a calibrated pocket penetrometer, with actual measurements of unconfined compressive strength performed on representative samples of native clay soils. Dry unit weight tests were also run on specimens of cohesive fill.

Reference is made to the attached boring logs which indicate subsurface stratigraphy and soil descriptions, results of field and laboratory tests, as well as water level observations. Definitions of descriptive terminology are also included. While strata changes are shown as a definite line on the boring logs, the actual transition between soil layers will probably be more gradual. Fluctuations in the groundwater table may also occur due to variations in precipitation (short-term and seasonal) as well as rises or drops in creek, pond or other nearby surface water features, i.e. water levels at a future date may be higher or lower than those recorded at the time of drilling.

Discussion of Test Data

Borings 2 - 5 and 7 - 9 were drilled on existing asphalt pavements, revealing 4 to 9 inches bituminous concrete, typically overlying 6 to 15 inches granular base course materials (up to 3 feet deep at B-8). The granular base course materials typically consisted of crushed stone and/or sand and gravel deposits. These measurements should be considered approximate, as they were estimated from the disturbed sides of the augered holes. Pavement cores may be taken if more accurate measurements or descriptions of the pavements are required (including possible fabric interlayers in the bituminous pavement).

Surficial topsoil (fill and/or native) was 12 inches thick at Borings 1 and 6. Fill materials primarily consisting of silty clay and sandy clay were found underlying the pavement section and/or surficial topsoil respread layer in Borings 2, 4, 5, 7 and 8. The fill extended approximately 3 to 6 feet below existing grade, up to 8 feet deep at B-1 in the northwest corner of the site. Samples of the cohesive fill were variable in consistency, exhibiting moisture contents and dry unit weights ranging from 11 to 21 percent and 109 to 125 pounds per cubic foot (pcf), respectively.

The exception was the organic clay fill materials encountered from approximately 5 to 8 feet deep in B-1. A sample of the organic clay fill exhibited a high moisture content and a low dry unit weight of 110 percent and 41 pcf, respectively.

Medium stiff to hard native silty clay soils otherwise predominated in the borings extending to completion depths. These cohesive soils exhibited unconfined compressive strengths typically ranging from 1.0 to 4.5+ tons per square foot (tsf) at moisture contents usually varying from 13 to 28 percent. A

3-foot thick layer of softer clay was encountered at approximately 5 feet deep in B-5. This cohesive soil layer exhibited a pocket penetrometer reading (estimate of unconfined compressive strength) of 0.25 tsf at a moisture contents of 38 percent.

Loose to medium dense silt deposits were also encountered as interbedded layers in the cohesive soil mass in Borings 1, 5, 7 and 9. These intermediate soils exhibited SPT N-values ranging from 4 to 13 blows per foot (bpf).

Borings 3, 4 and 6 - 8 were "dry" both during and following completion of drilling operations. Free water was first encountered at approximately 3 to 11 feet below existing grade in Borings 1, 2, 5 and 9. Upon completion of drilling operations the water levels in the boreholes typically rose by approximately 5 feet of initial readings at Borings 2 and 5, becoming “dry” in Borings 1 and 9.

Analysis and Recommendations

Detention Basins

As previously discussed, the focus of the current study is the three (3) detention basins located around the site. Their general locations, high water level and normal water levels (HWL & NWL) are listed in the following table:

Detention Basin	General Location	HWL	NWL
A	Northwest Corner	729.0	725.0
B	Central	---	728.0
C	East	729.0	724.0

Borings 1 - 6 were taken in the area of the proposed detention basin. Medium stiff to hard silty clay soils typically predominated in the borings with an organic clay layer encountered in B-1. These cohesive materials are usually stable on the 3H:1V to 5H:1V slopes typically used for detention basins in this area.

At Boring 1 drilled for the proposed northwest detention basin, a 3-foot layer of organic clay fill materials were encountered at 5½ feet below existing grade. These unsuitable/compressible soils are not considered stable on the 4H:1V slopes as proposed. Localized sloughing and long-term instability can be expected if they are left in-place on the side slopes. It is our opinion that the organic soils on the side slopes should be removed and replaced with engineered fill.

Replacement materials should consist of clay soil types of medium to high plasticity, ideally containing less than 35 percent sand and gravel sized particles. The majority of the clay deposits encountered by the borings meet these general requirements. The liner materials should be placed in approximate10 inch lifts loose measure and compacted to at least 90 percent of maximum dry density as determined by the Modified Proctor test (ASTM D 1557). At the time of placement and compaction the clay fill should also be on the wet side of optimum moisture content, as determined by the laboratory compaction curve.

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Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

It should be noted that the organic type materials are unsuitable as engineered fill, i.e. should not be placed in building pad or pavement areas. Non-structural areas will have to be found to dispose of them.

The cohesive materials in the borings are estimated to have very low coefficients of permeability in the range of 10^{-6} to 10^{-8} cm/sec, making them practically impervious. Design Infiltration Rates for USDA Soil Textures (University of Wisconsin, Madison, 2006) gives estimated values for these soil types of 0.07 in/hr or less, also considered to be very low.

Estimates of the seasonal high groundwater table (SHGWT) were made for the three (3) detention basins based upon a visual examination of the soil samples from Borings 1 - 6. For the cohesive soil types present at these locations, soil morphology and color change from brown to gray was the main indicator with the water level observations at the time of drilling typically being representative of a perched water condition in the upper fill materials. On this basis it is our opinion that the SHGWT are as follows for the basins:

Basin Name	Borings	Estimated SHGWT Elevation
A	1	719.0
B	2 - 4	724.0
C	5 & 6	720.0

In regard to the use of on-site borrow, upper silty clay soils occasionally exhibited water contents of 14 to 24 percent. It is estimated their use as engineered fill will require that the in-situ moisture be reduced by about 1 to 10+ percentage points. This reduction in moisture is typically achieved by spreading the material in a single lift and aerating with a continuous discing operation. For obvious reasons it will work best in hot, dry and windy weather. Lime modification can also be used as an alternative.

Building Foundations

Borings 7 - 9 were drilled in the proposed building footprints. Based on the results of the borings, the proposed structures may be supported on footing foundations designed for a net allowable bearing pressure of 3000 pounds per square foot (psf) as described below. It is understood that additional borings are to be drilled in the proposed building areas.

Since only preliminary building grades have been established, we have summarized in the following table the depth/elevations at which in-situ native soils are considered capable (or marginally capable) of supporting a net allowable bearing pressure of 3000 pounds per square foot (psf). Ground surface elevations at the boring locations and depths of surficial topsoil are also indicated. Added notes relate to the presence of marginal bearing soils for fill placement and/or foundation support (M). The 3000 psf bearing value is typical and generally satisfactory for industrial building construction as is proposed.

BORING NO.	GROUND SURFACE ELEVATION*	EXISTING FILL DEPTH (FEET)	3000 PSF NATIVE BEARING	
			DEPTH (FEET)	ELEVATION*
7	734.0	3.0	3.0 M	731.0
8	733.5	5.5	5.5	728.0
9	731.5	1.4	1.5	730.0

* Ground surface elevations at the borings are rounded to nearest 0.5 foot.

M Marginal bearing soils for fill placement and/or foundation support.

The native soils found directly underlying the existing fill materials are considered suitable (or marginally suitable) for support of 3000 psf bearing. These are typically indicated by bearing depths of 1.5 to 5.5 feet in the above table. Uppermost bearing soils consisted of very stiff to hard silty clay, encountering loose silt in the case of marginal bearing soils at B-7.

Moisture sensitive soil types, i.e. silt deposits, were also encountered at shallow depths in Boring 7. These latter materials can experience a loss of stability when subjected to rainfall or groundwater seepage, also being easily disturbed due to excavation operations or construction traffic, including foot traffic in the bottom of the foundation trenches.

Unstable soils exposed at footing grade should be at least partially removed and replaced with structural backfill. Undercuts on the order of 1 to 2 feet are typically required based on field observations. Foundation overexcavations are then backfilled and footings constructed at design elevations in accordance with the following recommended procedures.

The base of foundation overexcavations should exceed footing dimensions by at least 12 inches along each side, 6 inches for every foot of overdig where the undercut exceeds 2.0 feet in depth. Replacement materials should consist of crushed stone or crushed gravel between ¼ to 3 inches in size and containing no fines; IDOT gradations CA-1 and CA-7 meet these criteria. This "structural" fill should be spread in 12-inch layers loose thickness, each lift to be densified using vibratory compaction equipment or by tamping with a backhoe bucket. Footings constructed on the crushed stone or crushed gravel backfill may also be proportioned for 3000 psf bearing.

In order to preclude disproportionately small footing sizes, it is recommended that all continuous wall footings be made at least 24 inches wide, trench footings at least 12 inches wide and isolated foundations at least 3.0 feet square, regardless of calculated dimensions. For frost considerations, all exterior footings should be constructed at least 3.5 feet below outside finished grade and 4.0 feet for foundations located outside of heated building limits. Interior footings may be constructed at higher elevations as long as they are protected against frost heave in the event of winter construction.

Groundwater Management

Based on the water level observations made in the borings, serious groundwater problems are not anticipated, for slab-on-grade construction as is proposed. However, the accumulation of run-off water or seepage at the base of excavations may still be expected occur during foundation construction and

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site work. The Contractor should therefore be prepared to implement dewatering procedures, as a minimum to include pumping from strategically placed sumps.

Closure

It is recommended that full-time observation be provided by Testing Service Corporation personnel during foundation construction, so that the soils at undercut and foundation levels can be observed and tested. In addition, approval of building materials, stripping and undercutting, fill placement and compaction be monitored for compliance with the recommended procedures and specifications.

The analysis and recommendations submitted in this report are based upon the data obtained from the nine (9) soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings, the nature and extent of which may not become evident until during the course of construction. If variations are then identified, recommendations contained in this report should be re-evaluated after performing on-site observations.

It has been a pleasure to assist you with this work. Please call if there are any questions or if we may be of further service.

Respectfully submitted,

TESTING SERVICE CORPORATION

Samuel J. Patrick, E.I.T.
Staff Engineer

ALFREDO J. BERMUDEZ
062-046608
REGISTERED
PROFESSIONAL
ENGINEER
STATE OF ILLINOIS

Alfredo J. Bermudez
Senior Geotechnical Engineer
Registered Professional Engineer
Illinois No. 062-046608

SJP:AJB:sp
Enc.

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

GENERAL CONDITIONS

Geotechnical and Construction Services

TESTING SERVICE CORPORATION

1. PARTIES AND SCOPE OF WORK: If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Unless otherwise expressly assumed in writing, TSC's services are provided exclusively for client. TSC shall have no duty or obligation other than those duties and obligations expressly set forth in this Agreement. TSC shall have no duty to any third party. Client shall communicate these General Conditions to each and every party to whom the Client transmits any report prepared by TSC. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement. Unless otherwise agreed in writing, TSC's responsibility with respect to underground utility locations is to contact the Illinois Joint Utility Locating Information for Excavators for the location of public, but not private, utilities.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C.§ 6901, et, seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

7. DOCUMENTS AND SAMPLES: Client is granted an exclusive license to use findings and reports prepared and issued by TSC and any sub-consultants pursuant to this Agreement for the purpose set forth in TSC's proposal provided that TSC has received payment in full for its services. TSC and, if applicable, its sub-consultant, retain all copyright and ownership interests in the reports, boring logs, maps, field data, field notes, laboratory test data and similar documents, and the ownership and freedom to use all data generated by it for any purpose. Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

8. TERMINATION: TSC's obligation to provide services may be terminated by either party upon (7) seven days prior written notice. In the event of termination of TSC's services, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. The terms and conditions of these General Conditions shall survive the termination of TSC's obligation to provide services.

9. PAYMENT: Client shall be invoiced periodically for services performed. Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs and reasonable attorney's fees.

10. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

Should TSC or any of its employees be found to have been negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to $50,000 or the total amount of the fee paid to TSC for its services performed with respect to the project, whichever amount is greater.

In the event Client is unwilling or unable to limit the damages for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to $500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award of greater damages.

11. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

12. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

13. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.

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APPENDIX

UNIFIED CLASSIFICATION CHART

LEGEND FOR BORING LOGS

BORING LOGS

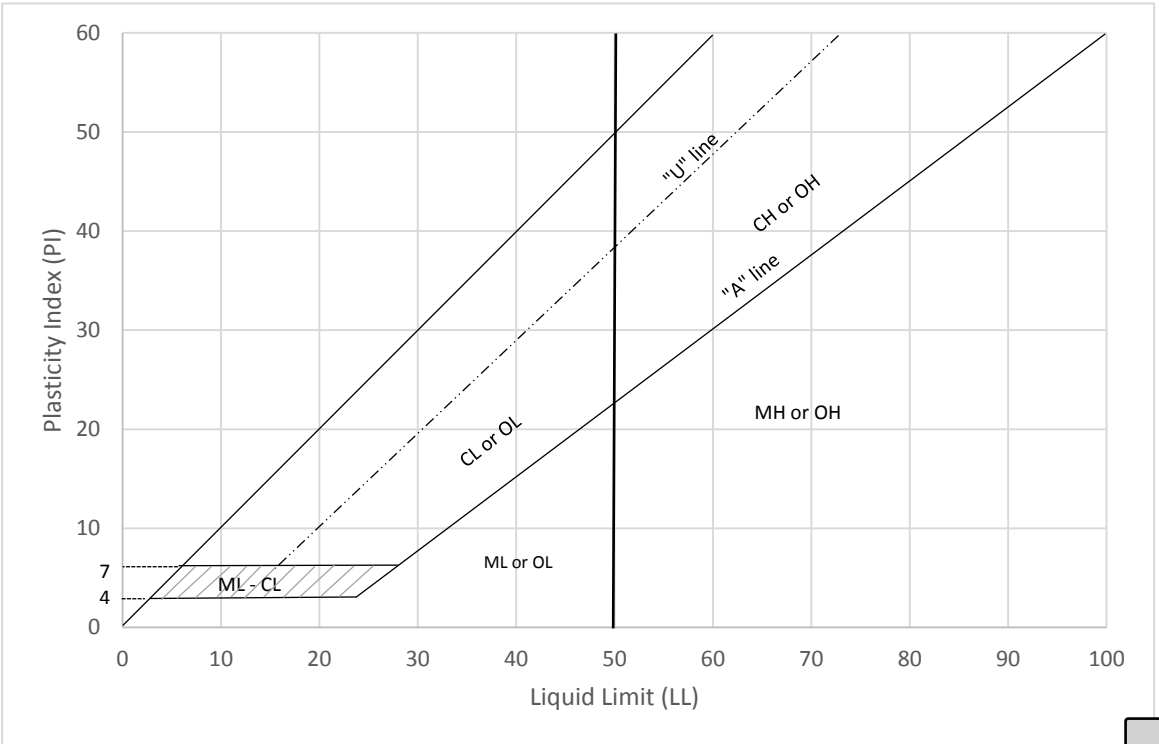
BORING LOCATION PLAN

Testing Service Corporation
Unified Classification Chart

CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TEST [o]				SOIL CLASSIFICATION	
				Group Symbol	GROUP NAME [b]
COARSE - GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS less than 5% fines [c]	$C_u \geq 4$ and $1 \leq C_C \leq 3$ [e]	GW	Well-graded gravel [f]
			$C_u < 4$ and/or $1 > C_C > 3$ [e]	GP	Poorly-graded gravel [f]
		GRAVELS WITH FINES more than 12% fines [c]	Fines classify as ML or MH	GM	Silty gravel [f, g, h]
			Fines classify as CL or CH	GC	Clayey gravel [f, g, h]
	SANDS 50% or more of coarse fraction passes No. 4 sieve	CLEAN SANDS less than 5% fines [d]	$C_u \geq 6$ and $1 \leq C_C \leq 3$ [e]	SW	Well-graded sand [l]
			$C_u < 6$ and/or $1 > C_C > 3$ [e]	SP	Poorly-graded sand [l]
		SANDS WITH FINES more than 12% fines [d]	Fines classify as ML or MH	SM	Silty sand [g, h, f]
			Fines classify as CL or CH	SC	Clayey sand [g, h, f]
FINE - GRAINED SOILS 50% or more passed the No. 200 sieve	SILTS & CLAYS Liquid limit less than 50%	Inorganic	PI > 7 or plots on or above "A" line j	CL	Lean clay [k, l, m]
			PI < 4 or plots below "A" line j	ML	Silt [k, l, m]
		Organic	$\frac{\text{Liquid limit – oven dried}}{\text{Liquid limit – not dried}} < 0.75$	OL	Organic clay [k, l, m, n] Organic silt [k, l, m, o]
	SILTS & CLAYS Liquid limit 50% or more	Inorganic	PI plots on or above "A" line	CH	Fat clay [k, l, m]
			PI plots below "A" line	MH	Elastic silt [k, l, m]
		Organic	$\frac{\text{Liquid limit – oven dried}}{\text{Liquid limit – not dried}} < 0.75$	OH	Organic clay [k, l, m, p] Organic silt [k, l, m, q]
Highly organic soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

a. Based on the material passing the 3-inch (75-mm) sieve.
b. If field sample contained cobbles and/or boulders, add "with cobbles and/or boulders" to group name
c. Gravels with 5 to 12% fines required dual symbols
GW-GM well graded gravel with silt
GW-GC well graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
d. Sands with 5 to 12% fines require dual symbols
SW-SM well graded sand with silt
SW-SC well graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay
e. $C_u = D_{60}/D_{10}$ $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

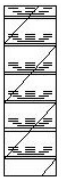
f. If soils contains ≥ 15% sand, add "with sand" to group name.
g. If fines classify as CL-ML, use dual symbol GC-GM, SC-SM
h. If fines are organic, add "with organic fines" to group name
i. If soils contains ≥ 15% gravel, add "with gravel" to group name
j. If Atterberg Limits plot in hatched area, soil is a CL – ML, silty clay
k. If soils contains 15 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant
l. If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name.
m. If soils contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name
n. PI ≥ 4 and plots on or above "A" line
o. PI ≥ 4 and plots below "A" line
p. PI plots on or above "A" line
q. PI plots below "A" line



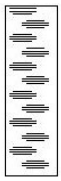
Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

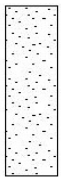
LEGEND FOR BORING LOGS

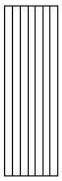
FILL

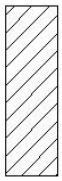

TOPSOIL

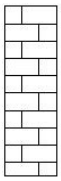
PEAT


GRAVEL


SAND


SILT


CLAY


LIMESTONE/ DOLOMITE

SAMPLE TYPE

SS	=	Split-Spoon
ST	=	Thin-Walled Tube
A	=	Auger
MC	=	Macro-Core (Geoprobe)

WATER LEVEL OBSERVATIONS

▼	While Drilling
▽	End of Boring
▼	24 Hours

FIELD AND LABORATORY TEST DATA

N	=	Standard Penetration Resistance in Blows per Foot (bpf)
WC	=	In-Situ Water Content (%)
Qu	=	Unconfined Compressive Strength in Tons per Square Foot (tsf)
	*	Pocket Penetrometer Reading: Maximum Value = 4.5 tsf
γ_{dry}	=	Dry Unit Weight in Pounds per Cubic Foot (pcf)

SOIL DESCRIPTIONS:

MATERIAL	PARTICLE SIZE RANGE
BOULDER	Over 12 inches
COBBLE	12 inches to 3 inches
Large GRAVEL	3 inches to ¾ inch
Small GRAVEL	¾ inch to No. 4 Sieve
Coarse SAND	No. 4 Sieve to No. 10 Sieve
Medium SAND	No. 10 Sieve to No. 40 Sieve
Fine SAND	No. 40 Sieve to No. 200 Sieve
SILT and CLAY	Passing No. 200 Sieve

COHESIVE SOILS

CONSISTENCY	Qu (tsf)
Very Soft	Less than 0.25
Soft	0.25 to 0.5
Medium Stiff	0.5 to 1.0
Stiff	1.0 to 2.0
Very Stiff	2.0 to 4.0
Hard	4.0 and over

COHESIONLESS SOILS

RELATIVE DENSITY	N (bpf)
Very Loose	0 – 3
Loose	4 – 9
Medium Dense	10 – 29
Dense	30 – 49
Very Dense	50 and over

MODIFYING TERM	PERCENT BY WEIGHT
Trace	1 – 10
Little	10 – 20
Some	20 – 35

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROJECT **New Office-Warehouse, 200 East Daniels Road, Palatine, IL**

CLIENT **Midwest Industrial Funds, 1211 W. 22nd Street Suite 410, Oak Brook, IL**

BORING **1** DATE STARTED **6-1-20** DATE COMPLETED **6-1-20** JOB **L-91,21**

ELEVATIONS

GROUND SURFACE **731.5**

END OF BORING **711.5**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **8.0 '**

AT END OF BORING **Dry**

24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
							1.0	730.5	FILL - Black clayey TOPSOIL (OL)
1	SS		9	15.2	2.25*	116			
2	SS		6	18.2	2.5*	113			FILL - Brown, gray and black silty CLAY, little sand and gravel, trace organic, moist (CL)
							5.5	726.0	
3	SS		4	110	1.25*	43			FILL - Black ORGANIC CLAY, very moist (OH)
							8.0	723.5	
4	SS		4	15.3					Loose brown and gray SILT, little fine sand, very moist (ML)
5	SS		5	16.6					
							13.0	718.5	
6	SS		7	17.8	1.66 1.5*				Stiff to very stiff gray silty CLAY, little sand and gravel, very moist to moist (CL)
7	SS		10	16.7	2.25*				
							20		End of Boring at 20.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **262**

TSC 91211.GPJ TSC_ALL.GDT 6/15/20

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROJECT **New Office-Warehouse, 200 East Daniels Road, Palatine, IL**

CLIENT **Midwest Industrial Funds, 1211 W. 22nd Street Suite 410, Oak Brook, IL**

BORING **2** DATE STARTED **6-1-20** DATE COMPLETED **6-1-20** JOB **L-91,21**

ELEVATIONS

GROUND SURFACE **733.5**

END OF BORING **718.5**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **10.5 '**

AT END OF BORING **5.0 '**

24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.5	733.0	6" Bituminous Concrete
									14" Sand and gravel
1	SS		10	17.3	3.0*	114	1.7	731.8	FILL - Brown and gray silty CLAY, little sand and gravel, trace organic, moist (CL)
							3.0	730.5	
2	SS		10	20.9	2.11 2.25*				▽
3	SS		6	18.7	2.0*				Very stiff brown and gray silty CLAY, little sand and gravel, occasional silt seams, moist (CL)
4	SS		9	18.6	2.56 2.5*				
							10.5	723.0	▼
5	SS		11	16.3	2.5*				Very stiff gray silty CLAY, little sand and gravel, moist (CL)
6	SS		13	14.8	2.25*				
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 91211.GPJ TSC_ALL.GDT 6/15/20

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROJECT **New Office-Warehouse, 200 East Daniels Road, Palatine, IL**

CLIENT **Midwest Industrial Funds, 1211 W. 22nd Street Suite 410, Oak Brook, IL**

BORING **3** DATE STARTED **6-1-20** DATE COMPLETED **6-1-20** JOB **L-91,21**

ELEVATIONS

GROUND SURFACE **733.5**

END OF BORING **718.5**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.5	733.0	6" Bituminous Concrete
							1.0	732.5	6" Sand and gravel
1	SS		7	12.7	2.75*				
2	SS		14	17.2	4.09 4.5*				Very stiff to hard brown and gray silty CLAY, little sand and gravel, moist (CL)
3	SS		11	14.4	2.25*				
							8.0	725.5	
4	SS		9	15.7	1.29 1.75*				Stiff grayish brown silty CLAY, little sand and gravel, moist to very moist (CL)
							10.5	723.0	
5	SS		11	16.3	2.75*				Very stiff gray silty CLAY, little sand and gravel, moist (CL)
6	SS		9	15.8	2.25*				
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 91211.GPJ TSC_ALL.GDT 6/15/20

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROJECT **New Office-Warehouse, 200 East Daniels Road, Palatine, IL**

CLIENT **Midwest Industrial Funds, 1211 W. 22nd Street Suite 410, Oak Brook, IL**

BORING **4** DATE STARTED **6-1-20** DATE COMPLETED **6-1-20** JOB **L-91,21**

ELEVATIONS

GROUND SURFACE **734.0**

END OF BORING **719.0**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.3	733.7	4" Bituminous Concrete
									15" Crushed Stone
	1	SS	5	16.7	4.5+*	116	1.6	732.4	FILL - Brown and gray trace black silty CLAY, little sand and gravel, trace organic, moist (CL)
							3.0	731.0	
	2	SS	12	15.6	2.81 2.75*				Very stiff brown and gray silty CLAY, little sand and gravel, moist (CL)
	3	SS	9	18.8	2.25*				
							8.0	726.0	
	4	SS	12	15.0	3.19 3.5*				Very stiff grayish brown silty CLAY, little sand and gravel, moist (CL)
							10.5	723.5	
	5	SS	14	14.8	2.75*				Very stiff gray silty CLAY, little to some sand and gravel, moist (CL)
	6	SS	12	15.0	3.5*				

End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 91211.GPJ TSC_ALL.GDT 6/15/20

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROJECT **New Office-Warehouse, 200 East Daniels Road, Palatine, IL**

CLIENT **Midwest Industrial Funds, 1211 W. 22nd Street Suite 410, Oak Brook, IL**

BORING **5** DATE STARTED **6-1-20** DATE COMPLETED **6-1-20** JOB **L-91,21**

ELEVATIONS

GROUND SURFACE **728.5**

END OF BORING **708.5**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **8.0 '**

AT END OF BORING **5.0 '**

24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.7	727.8	9" Bituminous Concrete
									12" Sand and Gravel
1	SS		7	19.9	3.0*	110	1.8	726.7	FILL - Brown, gray and black silty CLAY, little sand and gravel, trace organic, moist (CL)
							3.0	725.5	
2	SS		4	32.0	0.75*				▽ Medium stiff dark gray silty CLAY, little sand, trace organic, very moist (CL/CH)
3	SS		3	28.4	0.77 0.75*				
							8.0	720.5	▼
4	SS		WOH	38.0	0.25*				Very soft dark gray silty CLAY, trace sand, very moist (CL/CH)
							10.5	718.0	
5	SS		7	20.5	1.15 0.75*				Stiff brown and gray silty CLAY, little sand and gravel, very moist (CL)
							13.0	715.5	
6	SS		6	17.4					Loose brown and gray SILT, little fine sand, very moist (ML)
							17.0	711.5	
7	SS		11	13.2	2.5*				Very stiff gray silty CLAY, little sand and gravel, moist (CL)
									End of Boring at 20.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

WOH = Weight of Hammer

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 91211.GPJ TSC_ALL.GDT 6/15/20

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROJECT **New Office-Warehouse, 200 East Daniels Road, Palatine, IL**

CLIENT **Midwest Industrial Funds, 1211 W. 22nd Street Suite 410, Oak Brook, IL**

BORING **6** DATE STARTED **6-1-20** DATE COMPLETED **6-1-20** JOB **L-91,21**

ELEVATIONS

GROUND SURFACE **730.0**

END OF BORING **715.0**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0		
							1.0	729.0	Black clayey TOPSOIL (OL)
1	SS		12	24.2	3.5*				Very stiff brown and black silty CLAY, little sand and gravel, trace organic, moist (CL)
							3.0	727.0	
2	SS		12	16.2	4.98 4.5+*				Hard to very stiff brown silty CLAY, little sand and gravel, moist (CL)
3	SS		16	16.3	4.5+*				
4	SS		21	18.1	3.26 3.5*				
							10.5	719.5	
5	SS		15	15.5	4.5+*				Hard brown and gray silty CLAY, little sand and gravel, moist (CL)
							13.0	717.0	
6	SS		11	15.5	2.5*				Very stiff gray silty CLAY, little sand and gravel, moist (CL)
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 91211.GPJ TSC_ALL.GDT 6/15/20

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROJECT **New Office-Warehouse, 200 East Daniels Road, Palatine, IL**

CLIENT **Midwest Industrial Funds, 1211 W. 22nd Street Suite 410, Oak Brook, IL**

BORING **7** DATE STARTED **6-1-20** DATE COMPLETED **6-1-20** JOB **L-91,21**

ELEVATIONS

GROUND SURFACE **734.0**

END OF BORING **719.0**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.5	733.5	6" Bituminous Concrete
							1.0	733.0	6" Crushed Stone
1	SS		13	11.1	4.5+*	125			FILL - Brown and black sandy CLAY, little sand and gravel, trace organic, moist (CL-ML)
							3.0	731.0	
2	SS		8	18.1					Loose brown SILT, little fine sand, very moist (ML)
							5.5	728.5	
3	SS		14	17.2	3.32 3.5*				Very stiff gray silty CLAY, little sand and gravel, moist (CL)
							8.0	726.0	
4	SS		9	16.8	2.25*				Stiff to very stiff gray silty CLAY, little sand and gravel, moist (CL)
5	SS		9	16.7	1.92 1.75*				
6	SS		10	15.7	2.25*				
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 91211.GPJ TSC_ALL.GDT 6/15/20

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROJECT **New Office-Warehouse, 200 East Daniels Road, Palatine, IL**

CLIENT **Midwest Industrial Funds, 1211 W. 22nd Street Suite 410, Oak Brook, IL**

BORING **8** DATE STARTED **6-1-20** DATE COMPLETED **6-1-20** JOB **L-91,21**

ELEVATIONS

GROUND SURFACE **733.5**

END OF BORING **718.5**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.4	733.1	5" Bituminous Concrete
	1	SS	20						FILL - Brown SAND and GRAVEL, damp (SP/GP)
							3.0	730.5	
	2	SS	9	20.5	4.5+*	109			FILL - Brown and gray silty CLAY, little sand and gravel, moist (CL)
							5.5	728.0	
	3	SS	11	14.6	3.19 3.5*				Very stiff brown and gray silty CLAY, little sand and gravel, moist (CL)
							8.0	725.5	
	4	SS	12	15.7	2.75*				
	5	SS	11	15.7	3.19 2.5*				Very stiff to stiff gray silty CLAY, little sand and gravel, moist (CL)
	6	SS	9	16.0	1.75*				
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 91211.GPJ TSC_ALL.GDT 6/15/20

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PROJECT **New Office-Warehouse, 200 East Daniels Road, Palatine, IL**

CLIENT **Midwest Industrial Funds, 1211 W. 22nd Street Suite 410, Oak Brook, IL**

BORING **9** DATE STARTED **6-1-20** DATE COMPLETED **6-1-20** JOB **L-91,21**

ELEVATIONS

GROUND SURFACE **731.5**

END OF BORING **716.5**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **3.0 '**

AT END OF BORING **Dry**

24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.6	730.9	7" Bituminous Concrete
							1.4	730.1	9" Sand and Gravel
	1	SS	9	15.5	4.5+*				Hard to very stiff brown and gray silty CLAY, little sand and gravel, moist (CL)
	2	SS	9	22.4	2.30 2.5*				
							5.5	726.0	
	3	SS	5	20.1					Loose brown and gray SILT, little sand, very moist (ML)
							8.0	723.5	
	4	SS	10	16.0	3.32 3.5*				Stiff to very stiff gray silty CLAY, little to some sand and gravel, moist (CL)
	5	SS	11	15.4	1.75*				
	6	SS	10	15.1	2.75*				
									End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 91211.GPJ TSC_ALL.GDT 6/15/20

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

NOTE:
GROUND SURFACE ELEVATIONS AT THE BORINGS WERE ACQUIRED BY TSC USING A TRIMBLE R8S GNSS RECEIVER, BEING ROUNDED TO THE NEAREST 0.5 FOOT.

LEGEND

SOIL BORING LOCATION

BORING LOCATION PLAN
PHASE 1- DETENTION BASINS
NEW OFFICE/WAREHOUSE
200 EAST DANIELS RD
PALATINE, ILLINOIS

TESTING SERVICE CORPORATION
457 EAST GUNDERSEN DRIVE
CAROL STREAM, ILLINOIS 60188

DRAWN BY:	TJF
CHECKED BY:	SJP
JOB NO. :	L-91,211
DATE:	06-12-20

PAGE NO.
1 OF 1

SEE MWRD DRAINAGE EXHIBIT FOR OFF-SITE FLOW AREAS

ON-SITE AREA-1
A= 25.40 AC.
CN = 93.03
TC = 10 MIN

SEE MWRD DRAINAGE EXHIBIT FOR OFF-SITE FLOW AREAS

N

SCALE 1" = 60'
0 60 120

NO.	DATE	REMARKS

NO.	DATE	REMARKS

EXISTING DRAINAGE PLAN

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061EDP

DATE: 01/11/20

JOB NO. 11061

SHEET EDP 1 OF 1

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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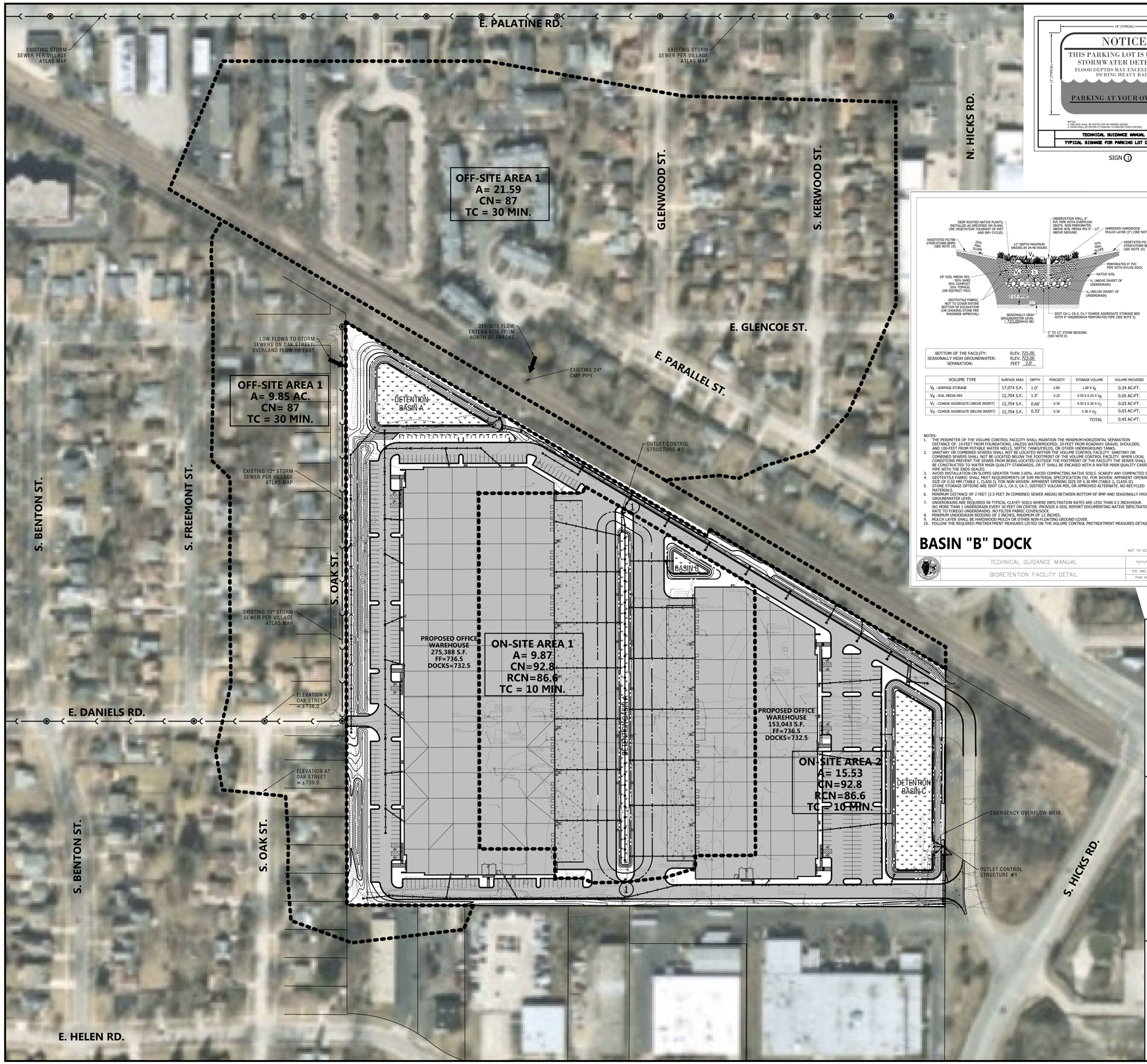
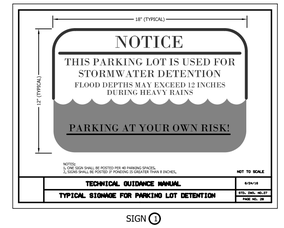
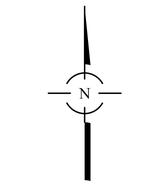




SIGN 1



BOTTOM OF THE FACILITY:	ELEV.	725.00
SEASONALLY HIGH GROUNDWATER:	ELEV.	723.00
SEPARATION:	FEET	2.0'

VOLUME TYPE	SURFACE AREA	DEPTH	POROSITY	STORAGE VOLUME	VOLUME PROVIDED
V_A : SURFACE STORAGE	17,074 S.F.	1.0'	1.00	1.00 X V_A	0.34 AC-FT.
V_B : SOIL MEDIA MIX	12,704 S.F.	1.5'	0.25	0.50 X 0.25 X V_B	0.05 AC-FT.
V_C : COARSE AGGREGATE (ABOVE INVERT)	12,704 S.F.	0.66'	0.36	0.50 X 0.36 X V_C	0.03 AC-FT.
V_D : COARSE AGGREGATE (BELOW INVERT)	12,704 S.F.	0.33'	0.36	0.36 X V_D	0.03 AC-FT.
				TOTAL	0.45 AC-FT.

NOTES:
1. THE PERIMETER OF THE VOLUME CONTROL FACILITY SHALL MAINTAIN THE MINIMUM HORIZONTAL SEPARATION DISTANCE OF: 10-FEET FROM FOUNDATIONS, UNLESS WATERPROOFED; 20-FEET FROM ROADWAY GRAVEL SHOULDER; AND 100-FEET FROM POTABLE WATER WELLS, SEPTIC TANKS/FIELDS, OR OTHER UNDERGROUND TANKS.
2. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED WITHIN THE VOLUME CONTROL FACILITY. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED BELOW THE FOOTPRINT OF THE VOLUME CONTROL FACILITY. WHEN LOCAL CONDITIONS PREVENT THE SEWER FROM BEING LOCATED OUTSIDE THE FOOTPRINT OF THE FACILITY THE SEWER SHALL BE CONSTRUCTED TO THE WATER MAIN QUALITY STANDARDS, OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH WELDED ENDS SEALED.
3. AVOID INSTALLATION ON SLOPES GREATER THAN 3.00%. AVOID COMPACTING NATIVE SOILS. SCARIFY ANY COMPACTED SOIL.
4. GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF 3UM MATERIAL SPECIFICATION 592. FOR WOVEN: APPARENT OPENING SIZE OF 0.50 MM (TABLE 1, CLASS I). FOR NON WOVEN: APPARENT OPENING SIZE OF 0.30 MM (TABLE 2, CLASS II).
5. STONE STORAGE OPTIONS ARE IDOT CA-1, CA-3, CA-7, DISTRICT VULCAN MIX, OR APPROVED ALTERNATE. NO RECYCLED MATERIALS.
6. MINIMUM DISTANCE OF 2 FEET (3.5 FEET IN COMBINED SEWER AREAS) BETWEEN BOTTOM OF BMP AND SEASONALLY HIGH GROUNDWATER LEVEL.
7. UNDERDRAINS ARE REQUIRED IN TYPICAL CLAYEY SOILS WHERE INFILTRATION RATES ARE LESS THAN 0.5 INCH/HOUR. NO MORE THAN 1 UNDERDRAIN EVERY 30 FEET ON CENTER. PROVIDE A SOIL REPORT DOCUMENTING NATIVE INFILTRATION RATE TO FOREGO UNDERDRAINS. NO 2 INCHES MAXIMUM SLOPE.
8. MAXIMUM STONE BEDDING OF 2 INCHES, MAXIMUM SIZE 12 INCHES.
9. MULCH LAYER SHALL BE HARDWOOD MULCH OR OTHER NON-FLOATING GROUND COVER.
10. FOLLOW THE REQUIRED PRETREATMENT MEASURES LISTED ON THE VOLUME CONTROL PRETREATMENT MEASURES DETAIL.

BASIN "B" DOCK

NOT TO SCALE

TECHNICAL GUIDANCE MANUAL	10/11/18
BIORETENTION FACILITY DETAIL	STD. DWG. NO.1
	PAGE NO.1

MWRD SUMMARY

LEGEND

- PERVIOUS AREA
- IMPERVIOUS AREA
- NATIVE PLANTINGS
- DRAINAGE AREA

DETAINED AREA CURVE NUMBER CALCULATIONS:

CN TRIBUTARY TO BASINS= 93.80

CN ADJUSTED= 86.60

TIME OF CONCENTRATION CALCULATIONS:

TC TRIBUTARY TO BASINS= 10.0 MIN (URBAN)

RELEASE RATE SUMMARY:

ALLOWABLE FLOW PER WMO ORDINANCE = 5.08 CFS (0.20 CFS/ACRE)

100 YEAR PEAK RELEASE RATE = 5.04 CFS

DETENTION SUMMARY:

VOL BASIN A = 2.26 AC-FT
VOL BASINS B = 0.96 AC-FT
VOL BASIN C = 4.57 AC-FT

SURFACE STORAGE = 7.79 AC.-FT

PIPE STORAGE = 0.94 AC-FT
DOCKS = 1.29 AC.-FT

TOTAL VOLUME PROV'D = 10.02 AC-FT

DETENTION REQUIRED = 9.52 AC-FT (PEAK 18-HR)

BMP VOLUME SUMMARY:

BELOW BASIN A STORAGE = 0.41 AC-FT
BELOW BASINS B STORAGE = 0.39 AC-FT
BELOW BASIN C STORAGE = 0.68 AC-FT
BASIN B SOIL MEDIA/CORAGE AGG. = 0.11 AC-FT

VOLUME CONTROL PROVIDED = 1.59 AC-FT

VOLUME CONTROL REQUIRED = 1.58 AC-FT

ON-SITE AREA SUMMARY:

TOTAL PROPERTY OWNERSHIP = 25.40 AC.

EXISTING PERVIOUS AREA = 5.26 AC.
EXISTING IMPERVIOUS AREA = 20.14 AC.

TOTAL DEVELOPMENT AREA = 25.40 AC.

ON-SITE AREA TRIBUTARY TO BASINS = 25.40 AC.

PROPOSED IMPERVIOUS AREA = 19.0 AC.
PROPOSED PERVIOUS AREA = 4.80 AC.
PROPOSED NATIVE PLANTINGS = 1.60 AC.

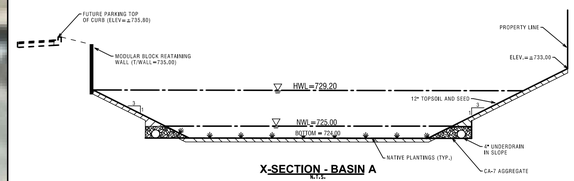
OFF-SITE AREA SUMMARY:

TOTAL UPSTREAM AREA = 31.44 AC.

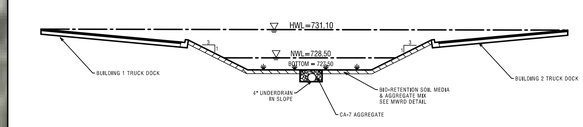
CURVE NUMBER (1/4 ACRE LOT) = 87.0 (ASSUMED)
TIME OF CONCENTRATION (TC) = 30.0 MIN (URBAN)

TOTAL 100 YEAR PEAK OVERLAND FLOW = 202.49 CFS

TOTAL PROVIDED EMERGENCY OVERFLOW WEIR = 210.0 CFS



X-SECTION - BASIN A
N.T.S.



X-SECTION - BASIN B
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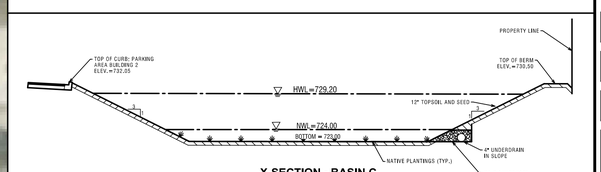

X-SECTION - BASIN C
N.T.S.

NO.	DATE	REMARKS

MWRD DRAINAGE EXHIBIT

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 698-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061-PDP

DATE: 01/11/20

JOB NO. 11061

SHEET **MWRD**
30 OF 30

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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FINAL SITE IMPROVEMENT PLANS
for
PALATINE CORPORATE CENTER

PALATINE, ILLINOIS

PROJECT NO:11061

DEVELOPER
MIDWEST INDUSTRIAL FUNDS
1211 W. 22ND STREET, SUITE 410
OAK BROOK, IL. 60523
PH: 630-230-6354

ARCHITECT
HARRIS ARCHITECTS, INC.
4801 EMERSON AVE #210
PALATINE, IL. 60067
PH: 847-624-7755

CALL J.U.L.I.E. 1-800-892-0123
WITH THE FOLLOWING:
COUNTY COOK
CITY, TOWNSHIP PALATINE
SEC. & ¼ SEC. NO. T42N, R10E, S23
48 HOURS BEFORE YOU DIG.
EXCLUDING SAT., SUN. & HOLIDAYS

BENCHMARK
ELEVATION:
DESCRIPTION: SEE SHEET GN FOR BENCHMARK INFORMATION

NOTE:
SPACECO, INC. IS TO BE NOTIFIED AT LEAST THREE (3) DAYS PRIOR TO STARTING CONSTRUCTION AND SHALL BE INCLUDED IN THE PRECONSTRUCTION MEETINGS

REVISIONS

ORIGINAL PLAN DATE: JANUARY 11TH, 2020

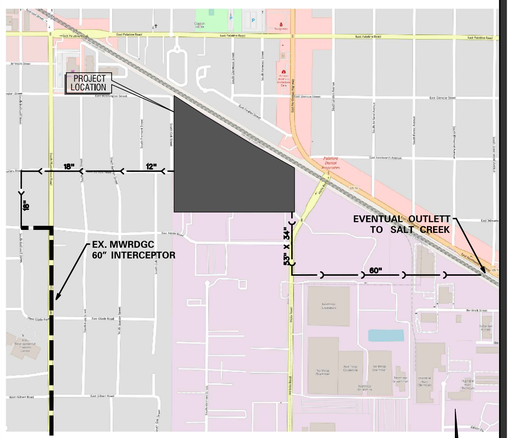
#	SHEET #	REMARKS	DATE

INDEX

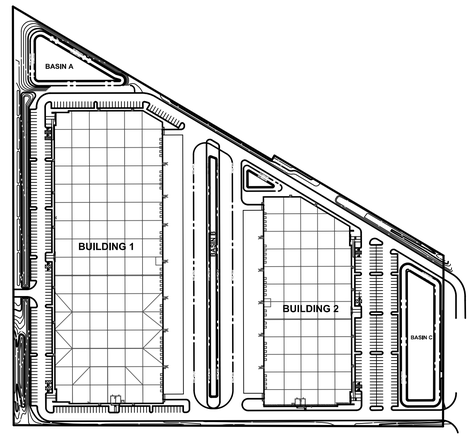
SHEET #	SHEET I.D.	SHEET DESCRIPTION
1	C1	COVER SHEET
2	GN	TYPICAL SECTIONS AND GENERAL NOTES
3-5	ET1-3	EXISTING CONDITIONS
6	DEMO	DEMOLITION PLAN
7	OV	OVERALL SITEPLAN
8-10	GM 1-3	GEOMETRIC PLANS
11-13	GR 1-3	GRADING PLANS
14	OVUT	OVERALL UTILITY PLAN
15-17	UT 1-3	UTILITY PLANS
18-19	PP1-PP2	SANITARY PLAN AND PROFILE
20-22	SESC 1-3	SOIL EROSION AND SEDIMENT CONTROL PLAN
23	S1	SPECIFICATIONS
24	DET 1	DETAILS 1
25-29	DET 2-6	DETAILS
30	MWRD	MWRD PDP

LOCATION MAP

(WITH SEWER MAP)



KEY MAP



ENGINEER
DANIEL C. STEVENS, P.E.
ILLINOIS REGISTRATION NO.: 062-057634
EXPIRATION DATE: 11/30/2021

PROFESSIONAL DESIGN FIRM NO.: 184-001157
EXPIRATION DATE: 04/30/2021

THESE PLANS OR ANY PART THEREOF SHALL BE CONSIDERED VOID WITHOUT THE SIGNATURE , SEAL, AND EXPIRATION DATE OF SEAL OF THE ENGINEER

01/22/20
DATE

LICENSED PROFESSIONAL ENGINEER
DANIEL C. STEVENS
NO. 062-057634
ILLINOIS

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

SPACECO INC.

FILENAME: 11061TITLE
DATE: 01/11/20
JOB NO. 11061
SHEET C1
1 OF 30

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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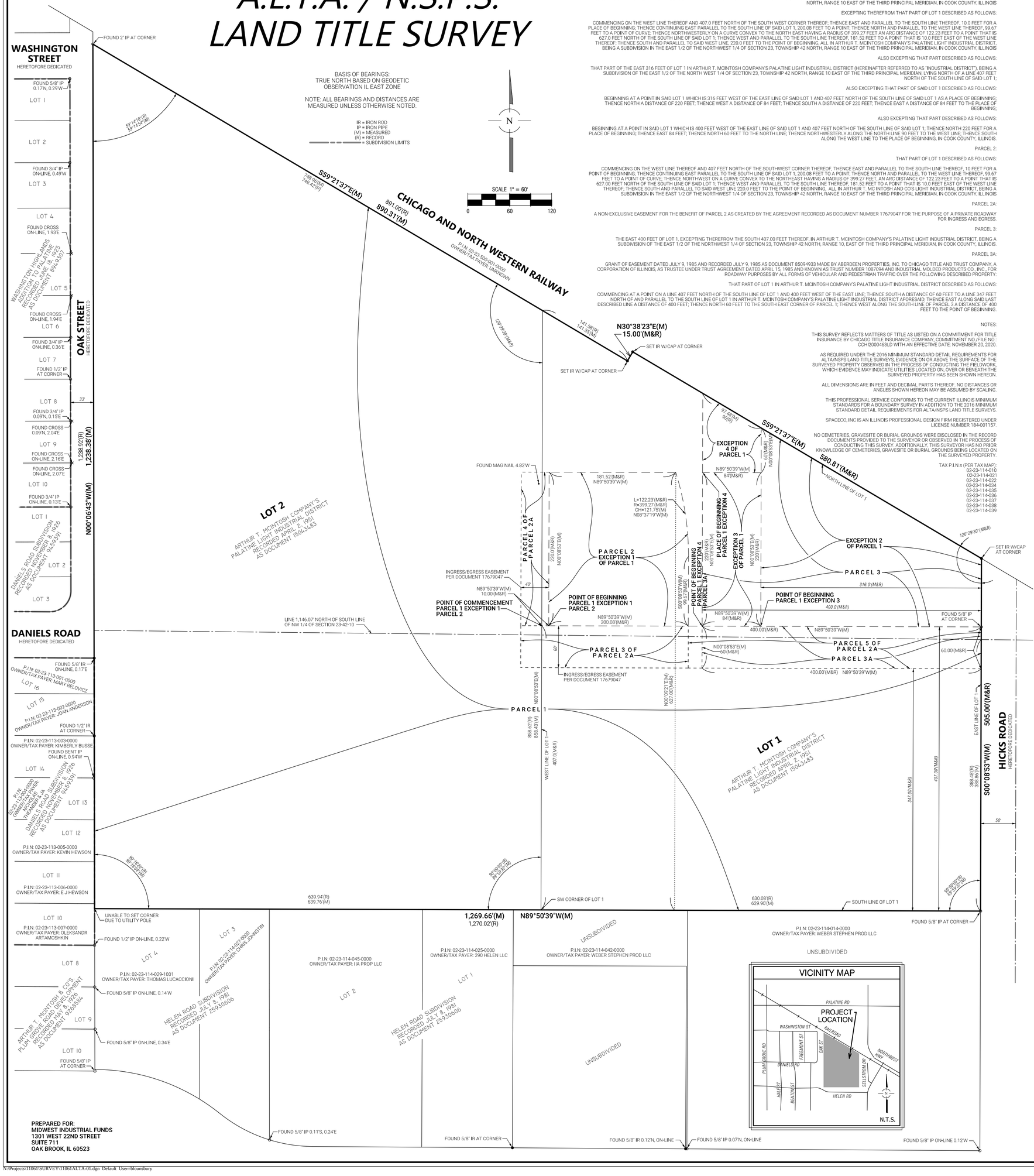
A.L.T.A. / N.S.P.S. LAND TITLE SURVEY



PREPARED FOR:
MIDWEST INDUSTRIAL FUNDS
1301 WEST 22ND STREET
SUITE 711
OAK BROOK, IL 60523

PROPERTY DESCRIPTION:

PARCEL 1:

LOTS 1 AND 2 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

EXCEPTING THEREFROM THAT PART OF LOT 1 DESCRIBED AS FOLLOWS:

COMMENCING ON THE WEST LINE THEREOF AND 407.0 FEET NORTH OF THE SOUTH WEST CORNER THEREOF; THENCE EAST AND PARALLEL TO THE SOUTH LINE THEREOF, 10.0 FEET FOR A PLACE OF BEGINNING; THENCE CONTINUING EAST PARALLEL TO THE SOUTH LINE OF SAID LOT 1, 200.08 FEET TO A POINT; THENCE NORTH AND PARALLEL TO THE WEST LINE THEREOF, 99.67 FEET TO A POINT OF CURVE; THENCE NORTHWESTERLY ON A CURVE CONVEX TO THE NORTH EAST HAVING A RADIUS OF 399.27 FEET AN ARC DISTANCE OF 122.23 FEET TO A POINT THAT IS 627.0 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE WEST AND PARALLEL TO THE SOUTH LINE THEREOF, 181.52 FEET TO A POINT THAT IS 10.0 FEET EAST OF THE WEST LINE THEREOF; THENCE SOUTH AND PARALLEL TO SAID WEST LINE, 220.0 FEET TO THE POINT OF BEGINNING, ALL IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

ALSO EXCEPTING THAT PART DESCRIBED AS FOLLOWS:

THAT PART OF THE EAST 316 FEET OF LOT 1 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT (HEREINAFTER REFERRED TO AS "INDUSTRIAL DISTRICT"), BEING A SUBDIVISION OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING NORTH OF A LINE 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1;

ALSO EXCEPTING THAT PART OF SAID LOT 1 DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN SAID LOT 1 WHICH IS 316 FEET WEST OF THE EAST LINE OF SAID LOT 1 AND 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1 AS A PLACE OF BEGINNING; THENCE NORTH A DISTANCE OF 220 FEET; THENCE WEST A DISTANCE OF 84 FEET; THENCE SOUTH A DISTANCE OF 220 FEET; THENCE EAST A DISTANCE OF 84 FEET TO THE PLACE OF BEGINNING;

ALSO EXCEPTING THAT PART DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN SAID LOT 1 WHICH IS 400 FEET WEST OF THE EAST LINE OF SAID LOT 1 AND 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE NORTH 220 FEET FOR A PLACE OF BEGINNING; THENCE EAST 84 FEET; THENCE NORTH 60 FEET TO THE NORTH LINE; THENCE NORTHWESTERLY ALONG THE NORTH LINE 90 FEET TO THE WEST LINE; THENCE SOUTH ALONG THE WEST LINE TO THE PLACE OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PARCEL 2:

THAT PART OF LOT 1 DESCRIBED AS FOLLOWS:

COMMENCING ON THE WEST LINE THEREOF AND 407 FEET NORTH OF THE SOUTHWEST CORNER THEREOF, THENCE EAST AND PARALLEL TO THE SOUTH LINE THEREOF, 10 FEET FOR A POINT OF BEGINNING; THENCE CONTINUING EAST PARALLEL TO THE SOUTH LINE OF SAID LOT 1, 200.08 FEET TO A POINT; THENCE NORTH AND PARALLEL TO THE WEST LINE THEREOF, 99.67 FEET TO A POINT OF CURVE; THENCE NORTHWEST ON A CURVE CONVEX TO THE NORTHEAST HAVING A RADIUS OF 399.27 FEET, AN ARC DISTANCE OF 122.23 FEET TO A POINT THAT IS 627.00 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE WEST AND PARALLEL TO THE SOUTH LINE THEREOF, 181.52 FEET TO A POINT THAT IS 10.0 FEET EAST OF THE WEST LINE THEREOF; THENCE SOUTH AND PARALLEL TO SAID WEST LINE 220.0 FEET TO THE POINT OF BEGINNING, ALL IN ARTHUR T. MC INTOSH AND CO'S LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

PARCEL 2A:

A NON-EXCLUSIVE EASEMENT FOR THE BENEFIT OF PARCEL 2 AS CREATED BY THE AGREEMENT RECORDED AS DOCUMENT NUMBER 17679047 FOR THE PURPOSE OF A PRIVATE ROADWAY FOR INGRESS AND EGRESS.

PARCEL 3:

THE EAST 400 FEET OF LOT 1, EXCEPTING THEREFROM THE SOUTH 407.00 FEET THEREOF, IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION OF THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 3A:

GRANT OF EASEMENT DATED JULY 9, 1985 AND RECORDED JULY 9, 1985 AS DOCUMENT 85094933 MADE BY ABERDEEN PROPERTIES, INC. TO CHICAGO TITLE AND TRUST COMPANY, A CORPORATION OF ILLINOIS, AS TRUSTEE UNDER TRUST AGREEMENT DATED APRIL 15, 1985 AND KNOWN AS TRUST NUMBER 1087094 AND INDUSTRIAL MOLDED PRODUCTS CO., INC., FOR ROADWAY PURPOSES BY ALL FORMS OF VEHICULAR AND PEDESTRIAN TRAFFIC OVER THE FOLLOWING DESCRIBED PROPERTY:

THAT PART OF LOT 1 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON A LINE 407 FEET NORTH OF THE SOUTH LINE OF LOT 1 AND 400 FEET WEST OF THE EAST LINE; THENCE SOUTH A DISTANCE OF 60 FEET TO A LINE 347 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF LOT 1 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT AFORESAID; THENCE EAST ALONG SAID LAST DESCRIBED LINE A DISTANCE OF 400 FEET; THENCE NORTH 60 FEET TO THE SOUTH EAST CORNER OF PARCEL 1, THENCE WEST ALONG THE SOUTH LINE OF PARCEL 3 A DISTANCE OF 400 FEET TO THE POINT OF BEGINNING.

NOTES:

THIS SURVEY REFLECTS MATTERS OF TITLE AS LISTED ON A COMMITMENT FOR TITLE INSURANCE BY CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO./FILE NO.: CCHI20004631D WITH AN EFFECTIVE DATE: NOVEMBER 20, 2020.

AS REQUIRED UNDER THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, EVIDENCE ON OR ABOVE THE SURFACE OF THE SURVEYED PROPERTY OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK, WHICH EVIDENCE MAY INDICATE UTILITIES LOCATED ON, OVER OR BENEATH THE SURVEYED PROPERTY HAS BEEN SHOWN HEREON.

ALL DIMENSIONS ARE IN FEET AND DECIMAL PARTS THEREOF. NO DISTANCES OR ANGLES SHOWN HEREON MAY BE ASSUMED BY SCALING.

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY IN ADDITION TO THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS.

SPACECO, INC IS AN ILLINOIS PROFESSIONAL DESIGN FIRM REGISTERED UNDER LICENSE NUMBER 184-001157.

NO CEMETERIES, GRAVESITE OR BURIAL GROUNDS WERE DISCLOSED IN THE RECORD DOCUMENTS PROVIDED TO THE SURVEYOR OR OBSERVED IN THE PROCESS OF CONDUCTING THIS SURVEY. ADDITIONALLY, THIS SURVEYOR HAS NO PRIOR KNOWLEDGE OF CEMETERIES, GRAVESITE OR BURIAL GROUNDS BEING LOCATED ON THE SURVEYED PROPERTY.

TAX P.I.N.s (PER TAX MAP):
02-23-114-010
02-23-114-021
02-23-114-022
02-23-114-034
02-23-114-035
02-23-114-036
02-23-114-037
02-23-114-038
02-23-114-039

NOTES (CONTINUED):

MONUMENTS WERE FOUND/SET AT THE PARCEL CORNERS AS SHOWN. (TABLE A ITEM 1)

ADDRESS:
200 EAST DANIELS ROAD
PALATINE, IL 60067
(TABLE A ITEM 2)

BASED UPON A REVIEW OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 17031C0181J MAP WITH AN EFFECTIVE DATE/MAP REVISED OF AUGUST 19, 2008, IT IS OUR CONSIDERED OPINION THAT THIS PROPERTY LIES IN ZONE X (UNSHADED) AREA OF MINIMAL FLOOD HAZARD AS IDENTIFIED BY SAID F.I.R.M. MAP. (TABLE A ITEM 3)

PROPERTY SURVEYED CONTAINS 1,105,840 SQUARE FEET, OR 25.387 ACRES, MORE OR LESS. (TABLE A ITEM 4)

SUBSTANTIAL FEATURES ARE SHOWN HEREON. (TABLE A ITEM 8)

NAME OF THE ADJOINERS SHOWN HEREON ARE CURRENT OWNERS AND/OR TAXPAYERS AS LISTED ON THE COOK COUNTY ASSESSOR'S WEBSITE ACCESSED ON APRIL 14, 2020. (TABLE A ITEM 13)

THE DISTANCE TO THE NEAREST INTERSECTION IS APPROXIMATELY 350 FEET SOUTH ON HICK ROAD TO HELLEN ROAD ON THE EAST. THE PROPERTY IS ALSO LOCATED AT THE INTERSECTION OF OAK STREET AND WASHINGTON STREET AND OAK STREET AND DANIELS ROAD ON THE WEST. (TABLE A ITEM 14)

AERIAL PHOTOGRAPHY PRODUCED BY SPACECO, INC. ON MARCH 26, 2020 UTILIZING POST-PROCESSED IMAGES AND ILLINOIS STATE PLANE COORDINATES VIA GNSS REAL TIME NETWORK (RELNET) AND EXCEEDS RECOMMENDED ACCURACIES FOR FEATURE & TOPOGRAPHIC SITE PLANS & SPECS PER FEDERAL GEOGRAPHIC DATA COMMITTEE (FGDC TABLE A-3).

NOTES FROM TITLE COMMITMENT:

A 19. TERMS, PROVISIONS AND CONDITIONS CONTAINED IN GRANT OF EASEMENT AND AGREEMENT RECORDED JULY 9, 1985 AS DOCUMENT 85094933 MADE BY AND BETWEEN ABERDEEN PROPERTIES, INC., CHICAGO TITLE AND TRUST COMPANY, AS TRUSTEE UNDER TRUST AGREEMENT DATED APRIL 15, 1985 AND KNOWN AS TRUST NUMBER 1087094 AND INDUSTRIAL MOLDED PRODUCTS COMPANY INC. FOR ROADWAY PURPOSES BY ALL FORMS OF VEHICULAR AND PEDESTRIAN TRAFFIC.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

C 21. RIGHTS OF THE VILLAGE OF PALATINE AS DISCLOSED BY GRANT DATED APRIL 26, 1948 AND RECORDED JUNE 21, 1948 AS DOCUMENT 14341018 TO ESTABLISH, INSTALL, MAINTAIN, REPAIR AND REPLACE A SEWER MAIN OR MAINS CONNECTED WITH THE SEWER SYSTEM OF THE VILLAGE FOR STORM WATER DRAINAGE, SANITARY SEWERAGE OR BOTH, UNDER THE SURFACE OF THE GROUND, ON AND ACROSS A STRIP OF LAND 10 FEET IN WIDTH ACROSS THE EAST 1/2 OF THE NORTHWEST 1/4, ALSO CONTAINED IN DEED RECORDED AS DOCUMENT 15896718.
(PARCELS 1 AND 3)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON. DOCUMENT 14635020 DESCRIBED WITHIN DOCUMENT 15896718 NOT PROVIDED TO THIS SURVEYOR.)

D 22. 30 FOOT EASEMENT FOR THE VILLAGE OF PALATINE FOR SEWER AND WATER SAID EASEMENT BEING 5 FEET NORTH OF AND 25 FEET SOUTH OF A LINE 1146.07 FEET NORTH OF THE SOUTH LINE OF THE NORTHWEST 1/4, AS DISCLOSED BY DOCUMENT 14635020 AND ALSO CONTAINED IN DEED RECORDED AS DOCUMENT 15896718 FROM ARTHUR T. MC INTOSH AND COMPANY TO ABERDEEN PROPERTIES, INC., A CORPORATION OF ILLINOIS, AND AS SHOWN ON THE PLAT OF SUBDIVISION RECORDED AS DOCUMENT 15043483.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

E 23. A PERPETUAL EASEMENT IN, OVER AND UPON THAT PART OF THE WEST 33 FEET OF LOT 2 IN ARTHUR T. MC INTOSH AND COMPANY'S LIGHT INDUSTRIAL DISTRICT LYING NORTH OF THE SOUTH LINE OF DANIELS ROAD AS EXTENDED EASTERLY FOR THE USE AND BENEFIT OF THE VILLAGE OF PALATINE AND THE PUBLIC FOR STREET, ROAD AND HIGHWAY PURPOSES; ALSO CONTAINED IN DOCUMENT 15896718 RECORDED MAY 4, 1954 FROM ARTHUR T. MC INTOSH AND COMPANY TO ABERDEEN PROPERTIES, INC.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

F 24. COVENANTS, CONDITIONS AND RESTRICTIONS AS ESTABLISHED BY DEED FROM ARTHUR T. MC INTOSH AND COMPANY TO ABERDEEN PROPERTIES, INC. DATED APRIL 28, 1954 AND RECORDED MAY 4, 1954 AS DOCUMENT 15896718 RELATING TO HEIGHT, PARKING FACILITIES AND APPROVAL OF BUILDING PLANS AND SPECIFICATIONS OF BUILDINGS TO BE ERECTED ON THE LAND.
NOTE: SAID INSTRUMENT CONTAINS NO PROVISION FOR A FORFEITURE OF OR REVERSION OF TITLE IN CASE OF BREACH OF CONDITION
(AFFECTS ALL)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY BUT IS NOT A PLOTTABLE ITEM.)

G 25. EASEMENT IN, UPON, UNDER AND ALONG THE NORTH 33 FEET OF THE SOUTH 413.92 FEET OF THE LAND TO INSTALL AND MAINTAIN ALL EQUIPMENT FOR THE PURPOSE OF SERVING THE LAND AND OTHER PROPERTY WITH TELEPHONE AND ELECTRIC SERVICE, AS CREATED BY GRANT TO THE COMMONWEALTH EDISON COMPANY AND THE ILLINOIS BELL TELEPHONE COMPANY RECORDED MARCH 10, 1955 AS DOCUMENT 16171139.
(AFFECTS ALL)
(SURVEYORS NOTE: THIS EXCEPTION APPEARS TO AFFECT THE SURVEYED PROPERTY AND IS SHOWN HEREON FROM THE ABOVE DESCRIPTION, DOCUMENT NOT PROVIDED TO THIS SURVEYOR.)

H 26. EASEMENT OVER THE EAST 10 FEET OF THE WEST 20 FEET OF THE FOLLOWING DESCRIBED PROPERTY: BEGINNING ON THE WEST LINE THEREOF AND 377.0 FEET NORTH OF THE SOUTHWEST CORNER THEREOF; THENCE EAST AND PARALLEL TO THE SOUTH LINE THEREOF 210.08 FEET; THENCE NORTH AND PARALLEL TO THE WEST LINE THEREOF 129.67 FEET TO A POINT OF CURVE; THENCE NORTHWESTERLY ON A CURVE CONVEX TO THE NORTHEAST HAVING A RADIUS OF 399.27 FEET AN ARC DISTANCE OF 122.23 FEET TO A POINT THAT IS 627.0 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE WEST AND PARALLEL TO THE SOUTH LINE THEREOF 191.52 FEET TO THE WEST LINE OF SAID LOT 1; THENCE SOUTH ALONG THE WEST LINE OF SAID LOT 1, 250 FEET TO THE POINT OF BEGINNING; ALSO THE EAST 9.92 FEET OF THE NORTH 250.0 FEET OF THE SOUTH 627.0 FEET OF LOT 2 TO NORTHERN ILLINOIS GAS COMPANY TO LAY, MAINTAIN, OPERATE, RENEW AND REMOVE A GAS MAIN AND FACILITIES TOGETHER WITH RIGHT OF ACCESS CREATED BY GRANT DATED MAY 24, 1962 AND RECORDED JUNE 28, 1962 AS DOCUMENT 18519112.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

I 27. RIGHT AND EASEMENT TO USE FOR ROADWAY PURPOSES FOR OWNERS AND OCCUPANTS OF LOTS 1 AND 2 IN PALATINE LIGHT INDUSTRIAL DISTRICT SUBDIVISION, THE PRIVATE ROADWAY LOCATED ON A STRIP OF LAND 40 FEET IN WIDTH LYING IMMEDIATELY SOUTH OF AND ADJOINING THAT PART OF THE EAST 316 FEET OF LOT 1, LYING NORTH OF A LINE 397 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1 IN PALATINE LIGHT INDUSTRIAL DISTRICT AS CONFIRMED IN DEED IN TRUST RECORDED OCTOBER 8, 1957 AS DOCUMENT 17032756 FROM ABERDEEN PROPERTIES INC., A CORPORATION OF ILLINOIS TO CHICAGO NATIONAL BANK, AS TRUSTEE UNDER TRUST AGREEMENT DATED SEPTEMBER 27, 1957 AND KNOWN AS TRUST NUMBER 14962, PROVIDED THE GRANTEE SHALL NOT CAUSE OR PERMIT THE PARKING OF TRUCKS, VEHICLES OR OTHER CONVEYANCES UPON SAID PRIVATE ROADWAY SO AS TO CAUSE UNREASONABLE BLOCKAGE OR INTERFERENCE WITH THE USE THEREOF AND ALSO CONTAINED IN DEED IN TRUST FROM SAME GRANTOR AND GRANTEE DATED FEBRUARY 28, 1958 AND RECORDED APRIL 1, 1958 AS DOCUMENT 17169812 OF THAT PART OF PRIVATE ROADWAY LOCATED IMMEDIATELY NORTH OF AND ADJOINING THE EAST 248.83 FEET OF THE SOUTH 357 FEET OF LOT 1 IN PALATINE LIGHT INDUSTRIAL DISTRICT.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION APPEARS TO AFFECT THE SURVEYED PROPERTY AND IS SHOWN HEREON FROM DOCUMENT 17032756. DOCUMENT 17169812 NOT PROVIDED TO THIS SURVEYOR, SHOWN HEREON PER THE ABOVE DESCRIPTION.)

J 28. EASEMENT FOR THE RIGHT TO LAY, MAINTAIN, OPERATE, RENEW AND REMOVE A GAS MAIN AND OTHER NECESSARY GAS FACILITIES, DATED OCTOBER 4, 1954 AND RECORDED OCTOBER 14, 1954 AS DOCUMENT 16043246 FROM ABERDEEN PROPERTIES, INC., A CORPORATION OF ILLINOIS TO NORTHERN ILLINOIS GAS COMPANY, A CORPORATION OF ILLINOIS, THE LOCATION OF SAID MAIN IS AS FOLLOWS: 25 FEET SOUTH OF AND PARALLEL WITH A LINE 1146.07 FEET NORTH OF THE SOUTH LINE OF THE NORTHWEST 1/4 OF SECTION 23, AS SHOWN BY BROKEN LINE ON THE PLAT OF SAID SUBDIVISION RECORDED AS DOCUMENT 15043483.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION APPEARS TO AFFECT THE SURVEYED PROPERTY AND IS SHOWN HEREON FROM THE ABOVE DESCRIPTION, DOCUMENT NOT PROVIDED TO THIS SURVEYOR.)

K 29. EASEMENT OVER THE SOUTH 5 FEET OF THE LAND FOR THE PURPOSE OF INSTALLING AND MAINTAINING ALL EQUIPMENT NECESSARY FOR THE PURPOSE OF SERVING THE SUBDIVISION AND OTHER PROPERTY WITH TELEPHONE AND ELECTRIC SERVICE, TOGETHER WITH RIGHT TO OVERHANG AERIAL SERVICE WIRES, TOGETHER WITH RIGHT OF ACCESS THERETO, AS GRANTED TO THE ILLINOIS BELL TELEPHONE COMPANY AND THE COMMONWEALTH EDISON COMPANY AND RECORDED AS DOCUMENT 22188260.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

L 30. PRIVATE ROADWAY AND THE COVENANTS AND CONDITIONS THEREIN CONTAINED DISCLOSED BY GRANT OF EASEMENT RECORDED OCTOBER 7, 1959 AS DOCUMENT 17679047 BETWEEN ABERDEEN PROPERTIES INC., AND FIRST NATIONAL BANK OF SKOKIE AS TRUSTEE UNDER TRUST AGREEMENT DATED JULY 10, 1959 AND KNOWN AS TRUST NUMBER 5132 OVER THE FOLLOWING PARTS OF LOTS 1 AND 2 IN PALATINE LIGHT INDUSTRIAL DISTRICT SUBDIVISION AFORESAID:

THAT PORTION OF LOTS 1 AND 2 CONSISTING OF A STRIP OF LAND 60 FEET IN WIDTH EXTENDING FROM THE EAST LINE OF PARCEL 2 AS DESCRIBED IN DOCUMENT 17679047 TO HICKS ROAD IN PALATINE, ILLINOIS, DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF PARCEL 2; THENCE EAST A DISTANCE OF 420 FEET ALONG A LINE 407 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF LOT 1 IN PALATINE LIGHT INDUSTRIAL DISTRICT AFORESAID TO THE EAST LINE OF SAID LOT 1; THENCE SOUTH A DISTANCE OF 60 FEET ALONG THE EAST LINE OF SAID LOT 1; THENCE WEST A DISTANCE OF 420 FEET ALONG A LINE 347 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF SAID LOT 1 TO THE SOUTHEAST CORNER OF PARCEL 3 (AS DESCRIBED IN SAID DOCUMENT 17679047); THENCE NORTH A DISTANCE OF 60 FEET ALONG THE EAST LINE OF PARCEL 3 TO THE POINT OF BEGINNING;

AND OVER THE FOLLOWING DESCRIBED REAL ESTATE DESIGNATED AS PARCEL 3 OF DOCUMENT 17679047: THAT PORTION OF LOTS 1 AND 2 IN PALATINE LIGHT INDUSTRIAL DISTRICT SUBDIVISION AFORESAID CONSISTING OF A STRIP OF LAND 60 FEET IN WIDTH LYING DIRECTLY SOUTH OF AND ADJACENT TO PARCEL 2 OF DOCUMENT 17679047 AND DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF PARCEL 2; THENCE WEST A DISTANCE OF 40 FEET; THENCE SOUTH A DISTANCE OF 60 FEET TO A LINE 347 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF LOT 1 IN SUBDIVISION AFORESAID; THENCE EAST ALONG SAID LAST DESCRIBED LINE A DISTANCE OF 240.908 FEET; THENCE NORTH 60 FEET TO THE SOUTHEAST CORNER OF PARCEL 2; THENCE WEST ALONG THE SOUTH LINE OF PARCEL 2 A DISTANCE OF 200.08 FEET TO THE POINT OF BEGINNING;

AND OVER AND ACROSS THE FOLLOWING DESCRIBED REAL ESTATE DESIGNATED AS PARCEL 4 OF DOCUMENT 17679047: THAT PORTION OF LOTS 1 AND 2 IN PALATINE LIGHT INDUSTRIAL DISTRICT SUBDIVISION AFORESAID CONSISTING OF A STRIP OF LAND 40 FEET IN WIDTH LYING DIRECTLY WEST OF AND ADJACENT TO PARCEL 2 OF DOCUMENT 17679047 AND DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF PARCEL 2; THENCE WEST A DISTANCE OF AND PARALLEL TO THE WEST LINE OF PARCEL 2 TO THE NORTHWEST CORNER OF PARCEL 3; THENCE EAST A DISTANCE OF 40 FEET ALONG THE NORTH LINE OF PARCEL 3 TO THE SOUTHWEST CORNER OF PARCEL 2; THENCE NORTH A DISTANCE OF 220 FEET ALONG THE WEST LINE OF PARCEL 2 TO THE POINT OF BEGINNING.

SAID PRIVATE ROADWAY FOR THE USE AND BENEFIT OF ALL OF THE OWNERS AND OCCUPANTS OF LOTS 1 AND 2 IN PALATINE LIGHT DISTRICT SUBDIVISION AFORESAID.
(PARCELS 1,2,)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE S

A.L.T.A. / N.S.P.S. LAND TITLE SURVEY

LEGEND

STORM SEWER	SANITARY MANHOLE	HAND HOLE	BC	BACK OF CURB
SANITARY SEWER	STORM MANHOLE	STREET LIGHT	BCX	BACK OF CURB CORNER
COMBINED SEWER	CATCH BASIN	UTILITY POLE	BX	BUILDING CORNER
WATER MAIN	INLET	TRAFFIC SIGNAL	CB	CATCH BASIN
GAS MAIN	FLARED END SECTION	TRAFFIC SIGNAL BOX	CL	CENTER
ELECTRIC MANHOLE	SPRINKLER HEAD	EC	EDGE OF CONCRETE
UNDERGROUND TELEPHONE LINE	TELEPHONE MANHOLE	BOLLARD	EP	EDGE OF PAVEMENT
UNDERGROUND ELECTRIC LINE	TELEPHONE UPRIGHT	MAILBOX	EPX	EDGE OF PAVEMENT CORNER
UNDERGROUND CATV LINE	ELECTRIC UPRIGHT	SIGN	FNC	FENCE
OVERHEAD WIRE(S) ON UTILITY POLES	CABLE TV UPRIGHT	UNIDENTIFIED MANHOLE	FNCX	FENCE CORNER
FIBER OPTIC LINE	FIRE HYDRANT	RIGHT-OF-WAY MONUMENT	FES	FLARED END SECTION
RAILROAD	VALVE AND VAULT	DISC	LP	LIGHT POLE
FENCE	WATER VALVE	IRON / STEEL ROD	PIV	POST INDICATOR VALVE
GUARDRAIL	B BOX	IRON PIPE	SA	SANITARY MANHOLE
EDGE OF WATER	AUXILARY VALVE	CUT CROSS	ST	STORM MANHOLE
WETLAND LIMITS	WELL	PK / MAG NAIL	UP	UTILITY POLE
	GAS VALVE	RAILROAD SPIKE	UPLP	UTILITY POLE/LIGHT POLE
	UTILITY POLE/LIGHT POLE			ASPHALT
				CONCRETE
				GRAVEL

N

SCALE 1" = 50'

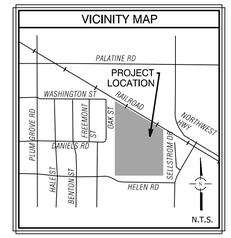
0 50 100

BASIS OF BEARINGS:
TRUE NORTH BASED ON GEODETIC OBSERVATION IL EAST ZONE

NOTE: ALL BEARINGS AND DISTANCES ARE MEASURED UNLESS OTHERWISE NOTED.

IR = IRON ROD
IP = IRON PIPE
(M) = MEASURED
(R) = RECORD
= SUBDIVISION LIMITS

VICINITY MAP



PREPARED FOR:
MIDWEST INDUSTRIAL FUNDS
1301 WEST 22ND STREET
SUITE 711
OAK BROOK, IL 60523

REVISIONS:
12/23/2020

SPACECO INC.

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 04/15/2020
JOB NO: 11061
FILENAME: 11061ALTA-01
SHEET 2 OF 3

N:\Projects\11061\SURVEY\11061ALTA-01.dgn SHEET 2 User=blounsbury

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

A.L.T.A. / N.S.P.S. LAND TITLE SURVEY

LEGEND

STORM SEWER	SANITARY MANHOLE	HAND HOLE	BC	BACK OF CURB
SANITARY SEWER	STORM MANHOLE	STREET LIGHT	BCR	BACK OF CURB CORNER
COMBINED SEWER	CATCH BASIN	UTILITY POLE	BX	BUILDING CORNER
WATER MAIN	INLET	TRAFFIC SIGNAL	CB	CATCH BASIN
GAS MAIN	FLARED END SECTION	TRAFFIC SIGNAL BOX	CL	CENTER
UNDERGROUND TELEPHONE LINE	ELECTRIC MANHOLE	SPRINKLER HEAD	EC	EDGE OF CONCRETE
UNDERGROUND ELECTRIC LINE	TELEPHONE MANHOLE	BOLLARD	EP	EDGE OF PAVEMENT
UNDERGROUND CATV LINE	TELEPHONE UPRIGHT	MAILBOX	EPK	EDGE OF PAVEMENT CORNER
OVERHEAD WIRE(S) ON UTILITY POLES	ELECTRIC UPRIGHT	SIGN	FNC	FENCE
FIBER OPTIC LINE	CABLE TV UPRIGHT	UNIDENTIFIED MANHOLE	FNCK	FENCE CORNER
RAILROAD	FIRE HYDRANT	RIGHT-OF-WAY MONUMENT	FES	FLARED END SECTION
FENCE	VALVE AND VAULT	DISC	LP	LIGHT POLE
GUARDRAIL	WATER VALVE	IRON / STEEL ROD	MH	SANITARY MANHOLE
EDGE OF WATER	B BOX	IRON PIPE	SM	STORM MANHOLE
WETLAND LIMITS	AUXILIARY VALVE	CUT CROSS	UP	UTILITY POLE
	WELL	PK / MAG NAIL	UPLP	UTILITY POLE/LIGHT POLE
	GAS VALVE	RAILROAD SPIKE		ASPHALT
				CONCRETE
				GRAVEL

SCALE 1" = 50'
0 50 100

BASIS OF BEARINGS:
TRUE NORTH BASED ON GEODETIC OBSERVATION IL EAST ZONE

NOTE: ALL BEARINGS AND DISTANCES ARE MEASURED UNLESS OTHERWISE NOTED.

SPACECO UAV AERIAL IMAGE
DATE OF FLIGHT: 03-26-2020

VICINITY MAP
PALATINE RD
PROJECT LOCATION
WASHINGTON ST
RAILROAD
NORTHWEST HWY
OAK ST
PLUM GROVE RD
FREEMONT
DANIELS RD
SELLSTROM
HALL ST
BENTON ST
HELEN RD
N.T.S.

WASHINGTON STREET
HERETOFORE DEDICATED

OAK STREET
HERETOFORE DEDICATED

DANIELS ROAD
HERETOFORE DEDICATED

HICKS ROAD
HERETOFORE DEDICATED

CHICAGO AND NORTH WESTERN RAILWAY

S59°21'37"E(M)
891.00'(R)
890.31'(M)

N30°38'23"E(M)
15.00'(M&R)

S59°21'37"E(M)
580.81'(M&R)

N00°06'43"W(M)
1,238.92'(R)
1,238.38'(M)

S00°08'53"W(M)
505.00'(M&R)

N89°50'39"W(M)
1,269.66'(M)
1,270.02'(R)

LINE 1,146.07' NORTH OF SOUTH LINE OF NW 1/4 OF SECTION 23-42-10

LOT 1
ARTHUR T. McINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT
RECORDED APRIL 2, 1951
AS DOCUMENT 1504483

LOT 2
ARTHUR T. McINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT
RECORDED APRIL 2, 1951
AS DOCUMENT 1504483

PREPARED FOR:
MIDWEST INDUSTRIAL FUNDS
1301 WEST 22ND STREET
SUITE 711
OAK BROOK, IL 60523

REVISIONS:

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 04/15/2020
JOB NO: 11061
FILENAME: 11061ALTA-01
SHEET 3 OF 3

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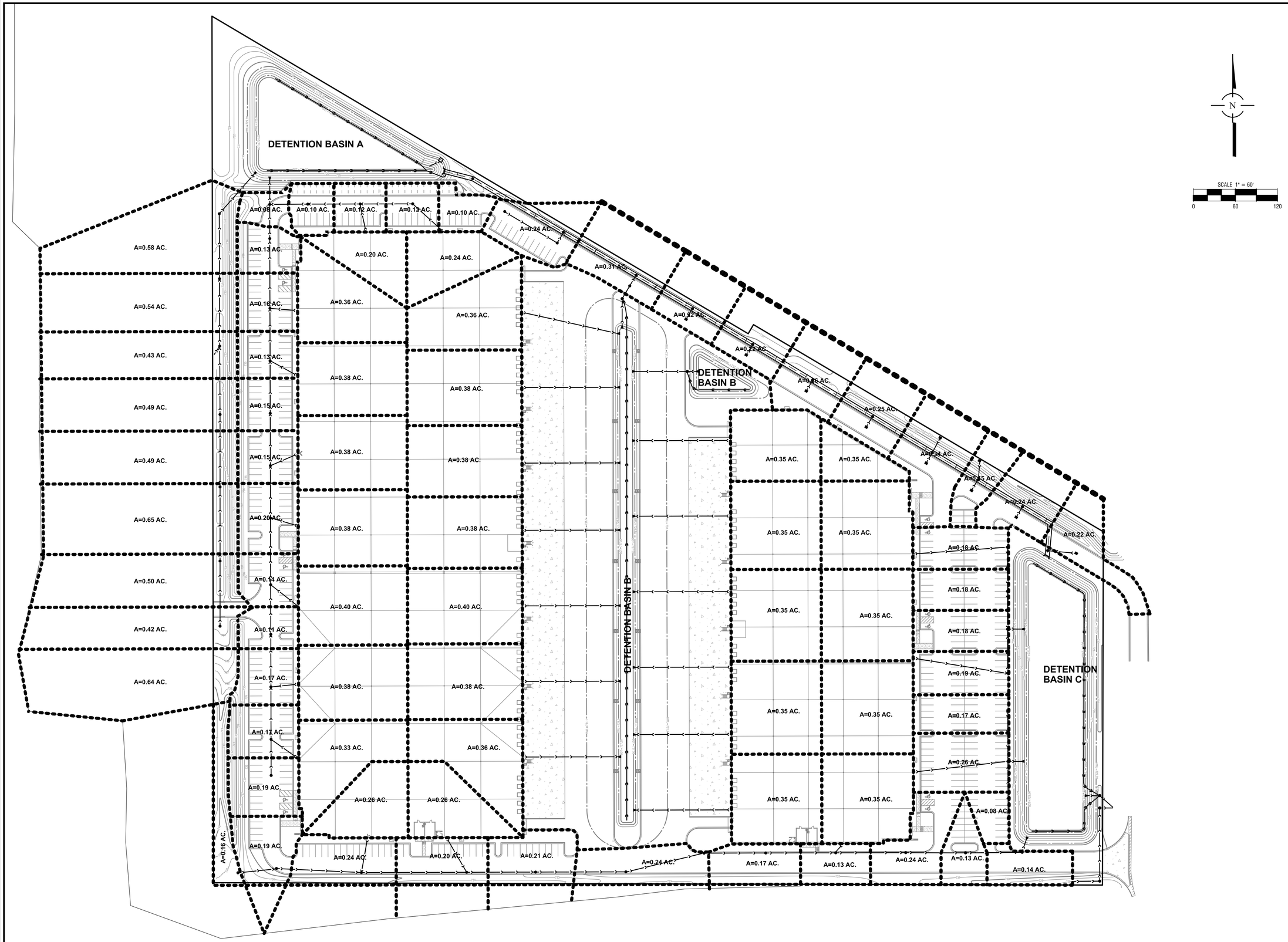
Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



NO.	DATE	REMARKS

NO.	DATE	REMARKS

INLET AREA MAP

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061IAM.DGN

DATE: 01/11/20

JOB NO. 11061

SHEET IAM 1 OF 1

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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TAB 3

STORMWATER MANAGEMENT PERMIT APPLICATION
FOR
PALATINE CORPORATE CENTER
PALATINE, COOK COUNTY, IL

PREPARED FOR
PANATTONI DEVELOPMENT COMPANY

PREPARED BY
SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018

SPACECO PROJECT # 11061

JANUARY 2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT: PALATINE CORPORATE CENTER
LOCATION: PALATINE, IL

PROJECT #: 11061
DATE: January-21
LAST REVISED:

CALCULATION TITLE: CURVE NUMBER CALCULATION
DESCRIPTION: DEVELOPMENT AREA
SITE CONDITION: EXISTING

Soil Name and Hydrologic Group (Appendix A)	Cover Description (Cover Type, Treatment, and hydrologic conditions; percent Impervious; unconnected/connected impervious area ratio)	Curve Number Table 5-7	Area Acres / Sq. M. X %	Product of Curve Number and Area
	TOTAL SITE			
D	IMPERVIOUS BUILDING	98	10.27	1006.46
D	IMPERVIOUS	98	9.87	967.26
D	PERVIOUS	74	5.26	389.24
		TOTALS =	25.40	2,363
			0.0397 sq. mi	

CN (weighted) = Total Product / Total Area = 2362.96 / 25.40 = 93.03

Total Pervious	0.00
Total Impervious	20.14
% Impervious	79.3%

USE CN = 93.03

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT: PALATINE CORPORATE CENTER
LOCATION: PALATINE, IL

PROJECT #: 11061
DATE: January-21
LAST REVISED:

CALCULATION TITLE: CURVE NUMBER CALCULATION
DESCRIPTION: TOTAL SITE AREA
SITE CONDITION: PROPOSED

Soil Name and Hydrologic Group (Appendix A)	Cover Description (Cover Type, Treatment, and hydrologic conditions; percent Impervious; unconnected/connected impervious area ratio	Curve Number Table 5-7	Area X Acres / Sq. M. / %	Product of Curve Number and Area
D	IMPERVIOUS	98	9.15	896.70
D	IMPERVIOUS (BLDS)	98	9.85	965.3
D	FUTURE	98		
D	EXISTING ROAD	98		
D	PERVIOUS	80	4.80	384.00
D	GRAVEL	89		
D	WATER SURFACE	100		
D	NEWLY GRADED AREAS	91		
D	NATIVE PLANTINGS	70	1.6	112
D	WETLANDS	91		
D	GREEN INFRASTRUCTURE			
D	NON-COMPACTED GRAVEL	91		
D	POROUS/PERMEABLE PAVEM'T	91		
D	BIOSWALE	63		
D	RAIN GARDEN	63		
		TOTALS =	25.40	2,358.00
			0.0397 sq. mi	

CN (weighted) = Total Product / Total Area = 2358.00 / 25.40 = 92.83

Total Pervious	4.80
Total Impervious	19.00
% Impervious	74.8%

USE CN = 92.8

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT:	PALATINE CORPORATE CENTER	**PROJECT #:**	11061
LOCATION:	PALATINE, IL	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: RUNOFF CURVE NUMBER ADJUSTMENT CALCULATOR
DESCRIPTION: TOTAL DEVELOPMENT AREA
SITE CONDITION: PROPOSED

Site Information:

Total Site Area, A_w (ac) =	25.40	Total Impervious Area, A_I (ac) =	19.00
Runoff, R (in) =	7.71		
P = rainfall depth (in) =	8.57		
CN =	92.83		
S =	0.77		
Runoff Volume Over Watershed, V_w (ac-ft) =	16.32		

Volume of GI Provided:

			Theoretical
Volume Control Storage, V_R =	1.58	ac-ft	1" of volume over impervious area
Volume Control Storage Provided, V_R =	1.590	ac-ft	
Additional Volume, V_{GI} =	0.01	ac-ft	Additional volume over the required 1"

Adjusted Volume Over Watershed, $V_{ADJ} = V_W - V_R - V_{GI}$

V_{ADJ} (ac-ft) =	14.73
Adjusted Runoff Over Watershed, $R_{ADJ} = \frac{V_{ADJ}}{A_W}$	
R_{ADJ} (in) =	6.96
S_{ADJ} =	1.55
Adjusted CN for detention calcs, CN_{ADJ} =	86.60

*Blue values are entered by user

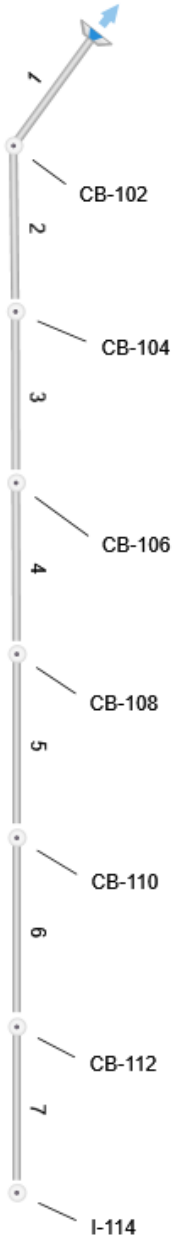
Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Plan View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-12-2021



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Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Storm Sewer Tabulation

Project Name: Enter Project Name...

Stormwater Studio 2020 v 3.0.0.22

01-12-2021

Line ID	Length	Drng Area		Rational	C x A		Tc		Intensity	Total Q	Capacity	Velocity	Line		Invert Elev		HGL Elev		Surface Elev		Line No
		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
	(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
Line 1	76.00	0.580	3.830	0.90	0.52	3.45	10.0	11.80	6.31	21.76	25.37	4.03	36	0.14	725.11	725.00	727.25	727.14	732.00	728.00	1
Line 2	93.00	0.540	3.250	0.90	0.49	2.93	10.0	11.47	6.39	18.70	33.17	3.18	36	0.25	725.34	725.11	727.58	727.53	732.00	732.00	2
Line 3	96.00	0.430	2.710	0.90	0.39	2.44	10.0	11.19	6.46	15.76	15.99	5.02	24	0.50	725.82	725.34	728.02	727.55	731.50	732.00	3
Line 4	96.00	0.490	2.280	0.90	0.44	2.05	10.0	10.91	6.53	13.41	15.99	4.27	24	0.50	726.30	725.82	728.66	728.32	732.00	731.50	4
Line 5	103.00	0.650	1.790	0.90	0.59	1.61	10.0	10.60	6.62	10.66	16.07	3.39	24	0.50	726.82	726.30	729.12	728.89	732.00	732.00	5
Line 6	106.00	0.500	1.140	0.90	0.45	1.03	10.0	10.26	6.71	6.88	8.41	3.90	18	0.64	727.50	726.82	729.65	729.19	732.00	732.00	6
Line 7	93.00	0.640	0.640	0.90	0.58	0.58	10.0	10.00	6.78	3.91	4.05	4.98	12	1.29	729.30	728.10	730.82	729.70	732.50	732.00	7

Notes: IDF File = BULL 75Modified-2020.idf, Return Period = 10-yrs.

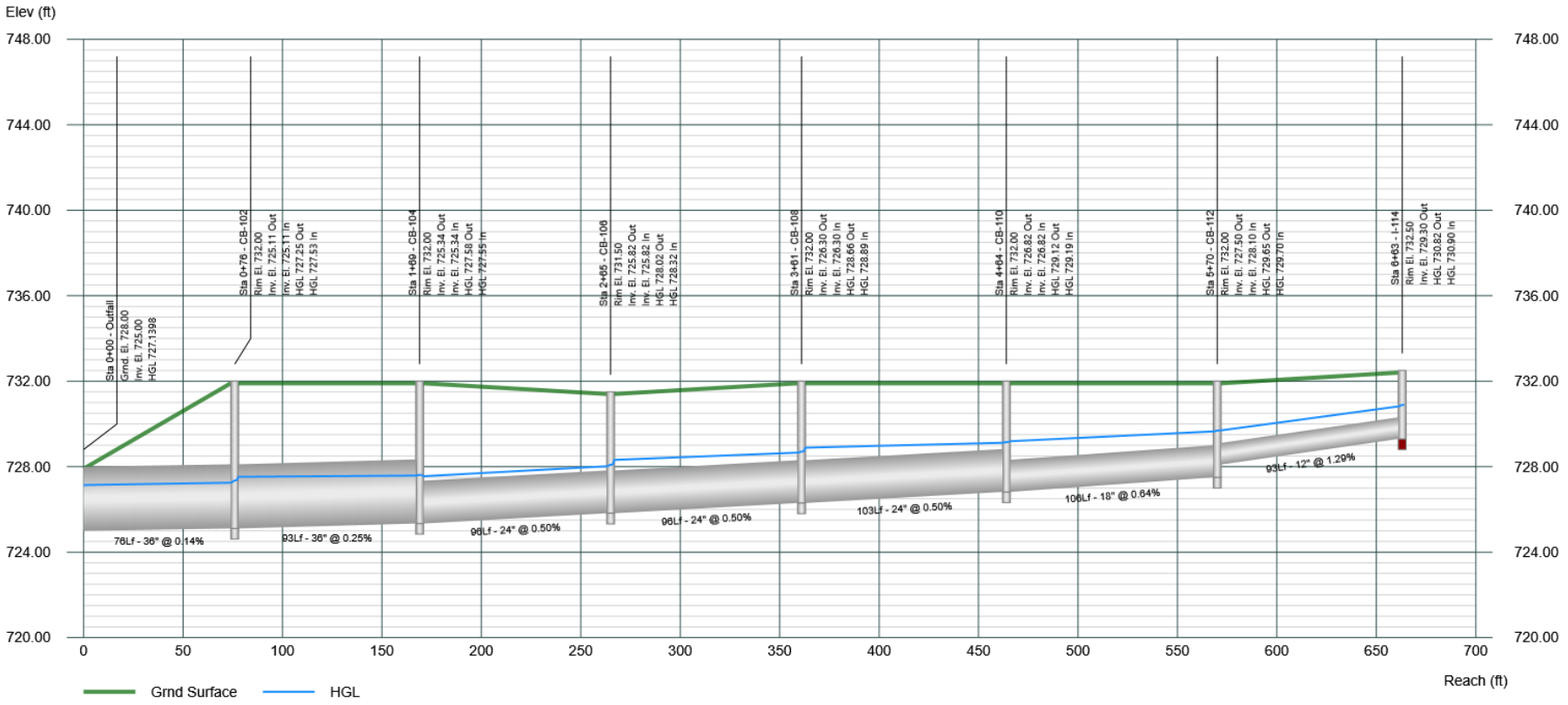
Project File: SYSTEM-100.sws

Profile View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-12-2021



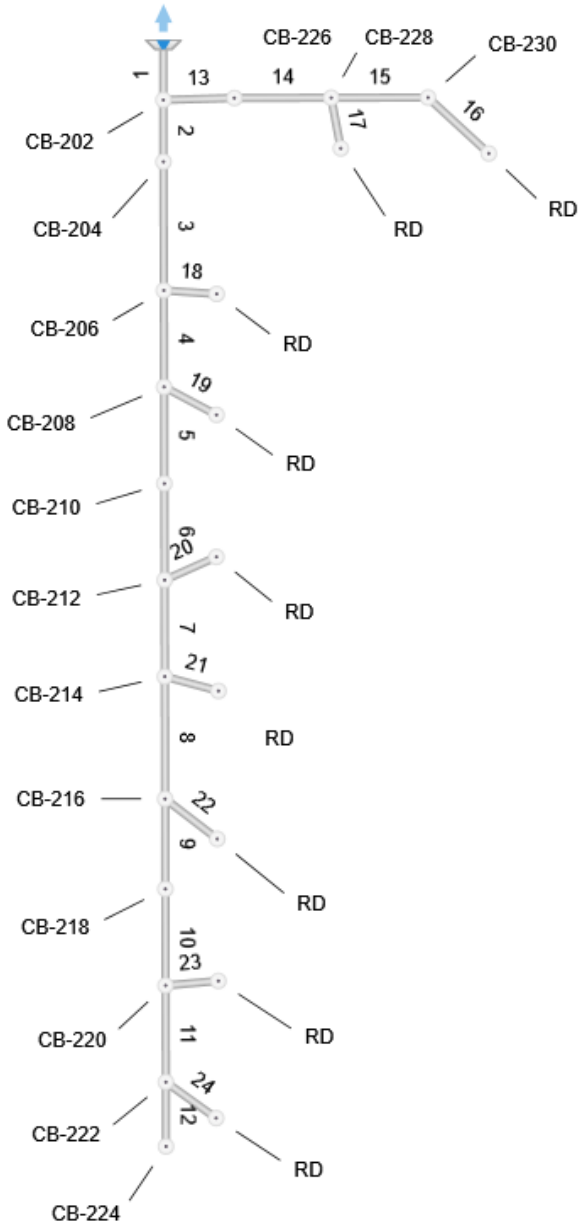
0.sws

Plan View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-12-2021



0.sws

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Storm Sewer Tabulation

Project Name: Enter Project Name...

Stormwater Studio 2020 v 3.0.0.22

01-12-2021

Line ID	Length	Drng Area		Rational	C x A		Tc		Intensity	Total Q	Capacity	Velocity	Line		Invert Elev		HGL Elev		Surface Elev		Line No
		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
	(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
Line 1	39.00	0.080	5.170	0.90	0.07	4.65	10.0	14.26	5.77	26.86	30.21	4.83	36	0.21	725.08	725.00	727.28	727.20	734.40	728.00	1
Line 2	48.00	0.130	4.310	0.90	0.12	3.88	10.0	14.06	5.81	22.54	25.47	3.57	36	0.15	725.15	725.08	727.65	727.60	734.40	734.40	2
Line 3	100.00	0.160	4.180	0.90	0.14	3.76	10.0	13.66	5.89	22.18	25.83	3.41	36	0.15	725.30	725.15	727.87	727.78	734.40	734.40	3
Line 4	75.00	0.130	3.660	0.90	0.12	3.29	10.0	13.33	5.96	19.64	24.36	2.94	36	0.13	725.40	725.30	728.07	728.01	734.40	734.40	4
Line 5	75.00	0.150	3.150	0.90	0.14	2.84	10.0	13.00	6.04	17.11	24.35	2.53	36	0.13	725.50	725.40	728.21	728.17	734.40	734.40	5
Line 6	75.00	0.150	3.000	0.90	0.14	2.70	10.0	12.66	6.11	16.50	24.35	2.43	36	0.13	725.60	725.50	728.32	728.28	734.40	734.40	6
Line 7	75.00	0.200	2.470	0.90	0.18	2.22	10.0	12.31	6.19	13.76	24.36	2.03	36	0.13	725.70	725.60	728.42	728.39	734.40	734.40	7
Line 8	95.00	0.140	1.890	0.90	0.13	1.70	10.0	11.79	6.31	10.74	21.64	1.59	36	0.11	725.80	725.70	728.49	728.47	734.50	734.40	8
Line 9	70.00	0.110	1.350	0.90	0.10	1.22	10.0	11.42	6.40	7.78	25.21	1.17	36	0.14	725.90	725.80	728.54	728.53	734.50	734.50	9
Line 10	75.00	0.170	1.240	0.90	0.15	1.12	10.0	11.01	6.51	7.27	24.35	1.12	36	0.13	726.00	725.90	728.56	728.55	734.50	734.50	10
Line 11	75.00	0.170	0.690	0.90	0.15	0.62	10.0	10.52	6.64	4.12	24.35	0.65	36	0.13	726.10	726.00	728.58	728.58	734.40	734.50	11
Line 12	50.00	0.190	0.190	0.90	0.17	0.17	10.0	10.00	6.78	1.16	21.10	0.19	36	0.10	726.15	726.10	728.59	728.59	734.40	734.40	12
Line 13	55.00	0.100	0.780	0.90	0.09	0.70	10.0	10.80	6.56	4.61	7.76	4.58	18	0.55	729.45	729.15	730.28	729.98	734.40	734.40	13
Line 14	75.00	0.120	0.680	0.90	0.11	0.61	10.0	10.52	6.64	4.06	7.67	3.31	18	0.53	729.85	729.45	730.71	730.62	734.40	734.40	14
Line 15	75.00	0.120	0.360	0.90	0.11	0.32	10.0	10.20	6.73	2.18	2.76	2.83	12	0.60	730.30	729.85	731.22	730.97	734.40	734.40	15
Line 16	64.00	0.240	0.240	0.90	0.22	0.22	10.0	10.00	6.78	1.47	4.88	2.74	12	1.88	731.50	730.30	732.01	731.37	736.50	734.40	16
Line 17	40.00	0.200	0.200	0.90	0.18	0.18	10.0	10.00	6.78	1.22	5.63	4.26	12	2.50	731.50	730.50	731.97	730.84	736.50	734.40	17
Line 18	41.00	0.360	0.360	0.90	0.32	0.32	10.0	10.00	6.78	2.20	4.82	4.86	12	1.83	731.50	730.75	732.13	731.26	736.50	734.40	18
Line 19	46.00	0.380	0.380	0.90	0.34	0.34	10.0	10.00	6.78	2.32	4.55	4.86	12	1.63	731.50	730.75	732.15	731.29	736.50	734.40	19
Line 20	44.00	0.380	0.380	0.90	0.34	0.34	10.0	10.00	6.78	2.32	4.65	4.89	12	1.70	731.50	730.75	732.15	731.28	736.50	734.40	20
Line 21	43.00	0.380	0.380	0.90	0.34	0.34	10.0	10.00	6.78	2.32	4.70	4.91	12	1.74	731.50	730.75	732.15	731.28	736.50	734.40	21
Line 22	51.00	0.400	0.400	0.90	0.36	0.36	10.0	10.00	6.78	2.44	4.32	4.88	12	1.47	731.50	730.75	732.16	731.31	736.50	734.50	22

Notes: IDF File = BULL 75Modified-2020.idf, Return Period = 10-yrs.

Project File: SYSTEM-200.sws

Storm Sewer Tabulation

Project Name: Enter Project Name...

Stormwater Studio 2020 v 3.0.0.22

01-12-2021

Line ID	Length	Drng Area		Rational	C x A		Tc		Intensity	Total Q	Capacity	Velocity	Line		Invert Elev		HGL Elev		Surface Elev		Line No
		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
	(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
Line 23	41.00	0.380	0.380	0.90	0.34	0.34	10.0	10.00	6.78	2.32	4.82	4.94	12	1.83	731.50	730.75	732.15	731.27	736.50	734.50	23
Line 24	48.00	0.330	0.330	0.90	0.30	0.30	10.0	10.00	6.78	2.01	4.45	4.61	12	1.56	731.50	730.75	732.10	731.25	736.50	734.40	24

Notes: IDF File = BULL 75Modified-2020.idf, Return Period = 10-yrs.

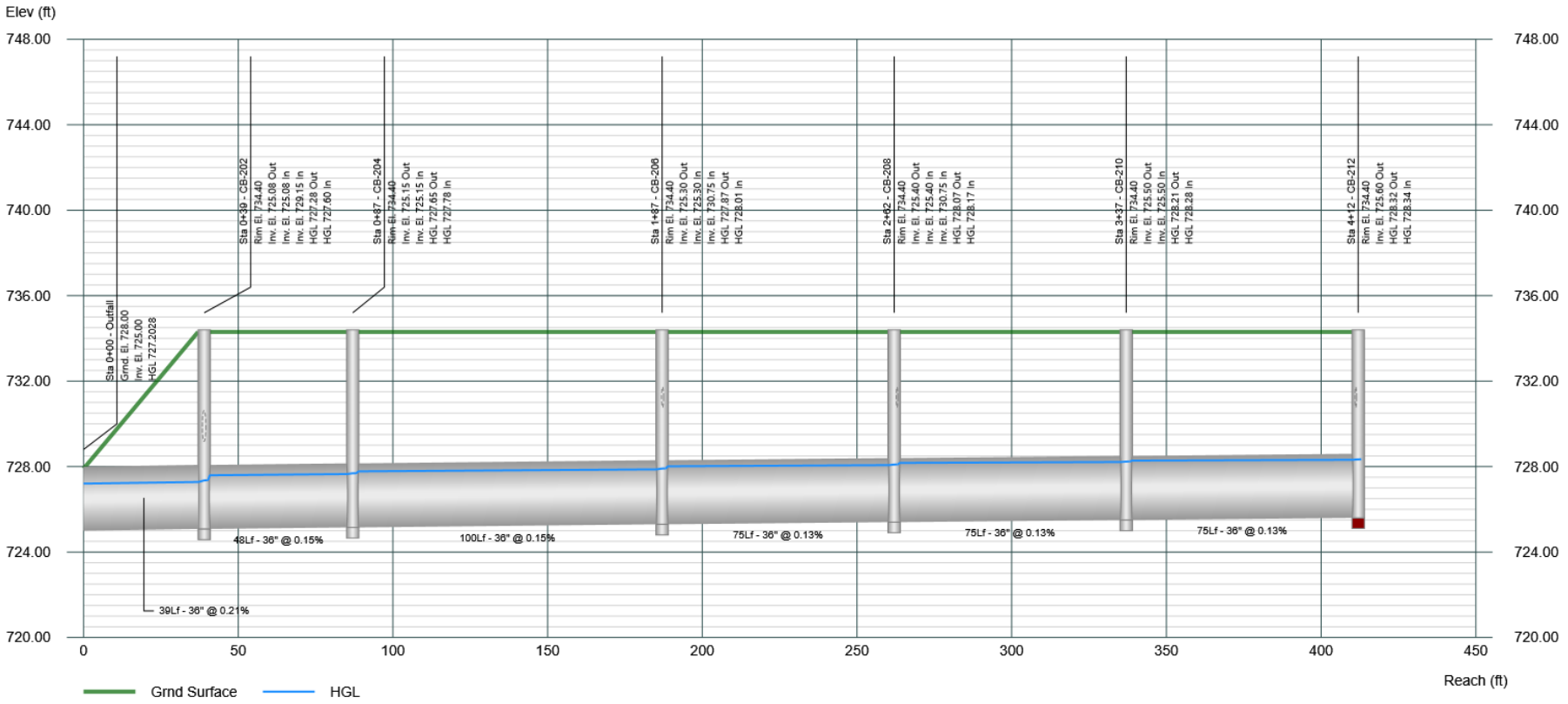
Project File: SYSTEM-200.sws

Profile View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-12-2021



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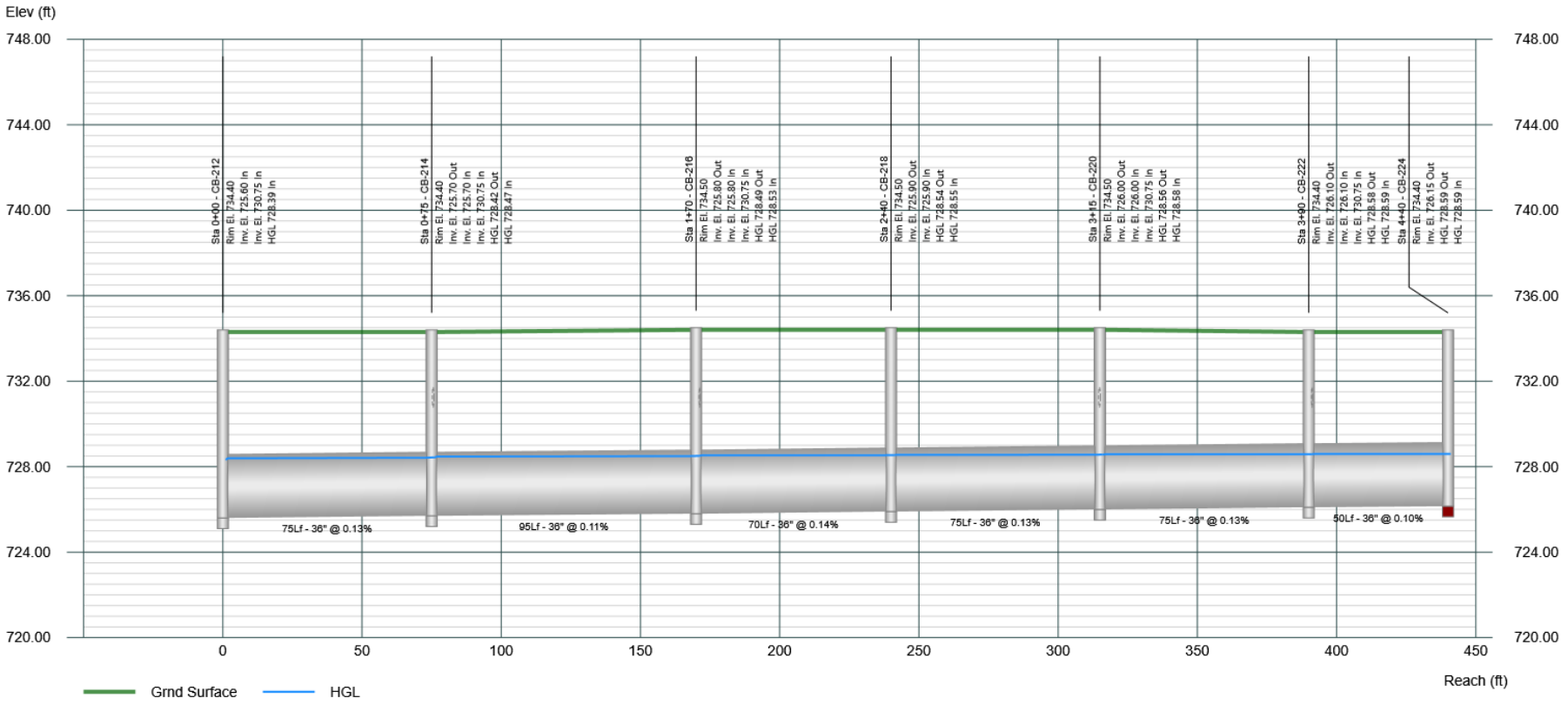
Profile View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-12-2021



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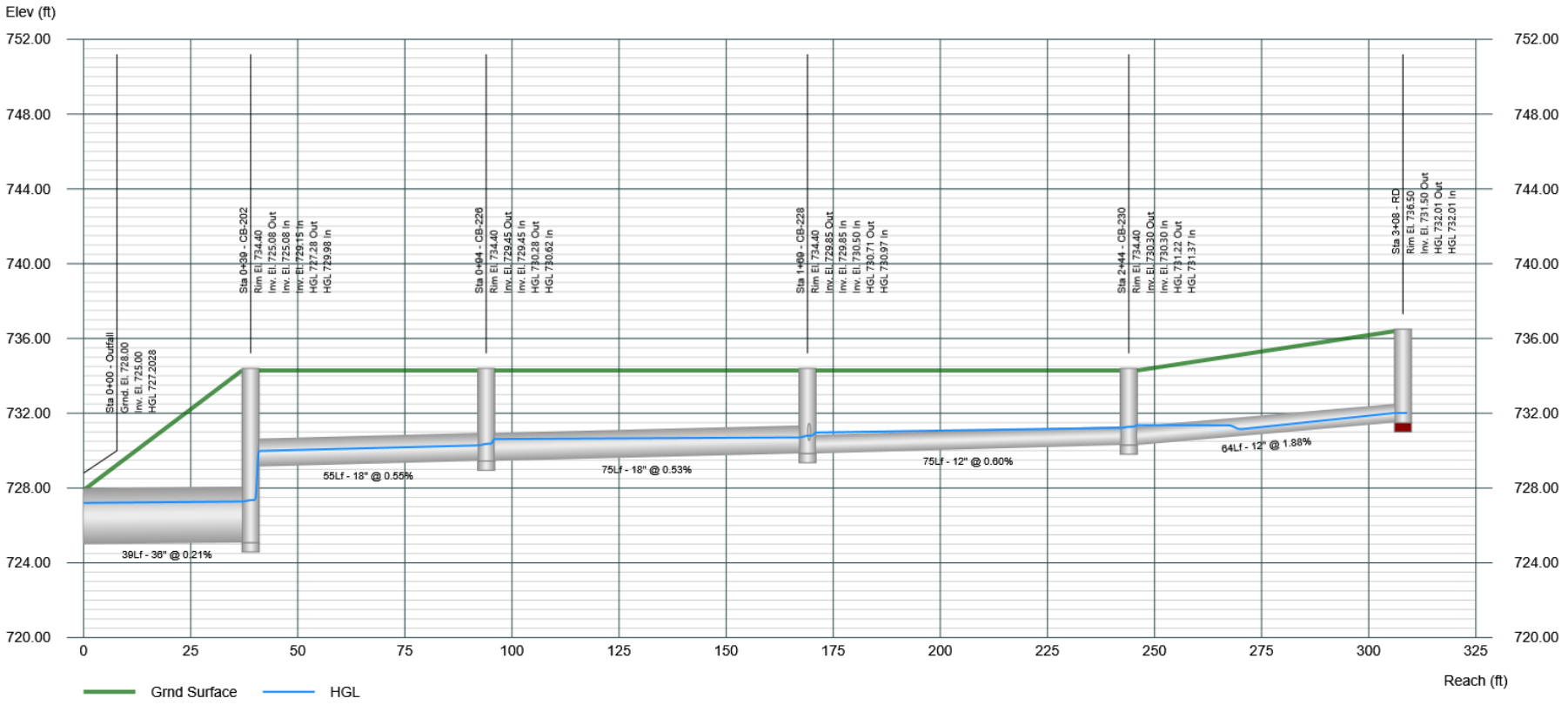
Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Profile View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-12-2021



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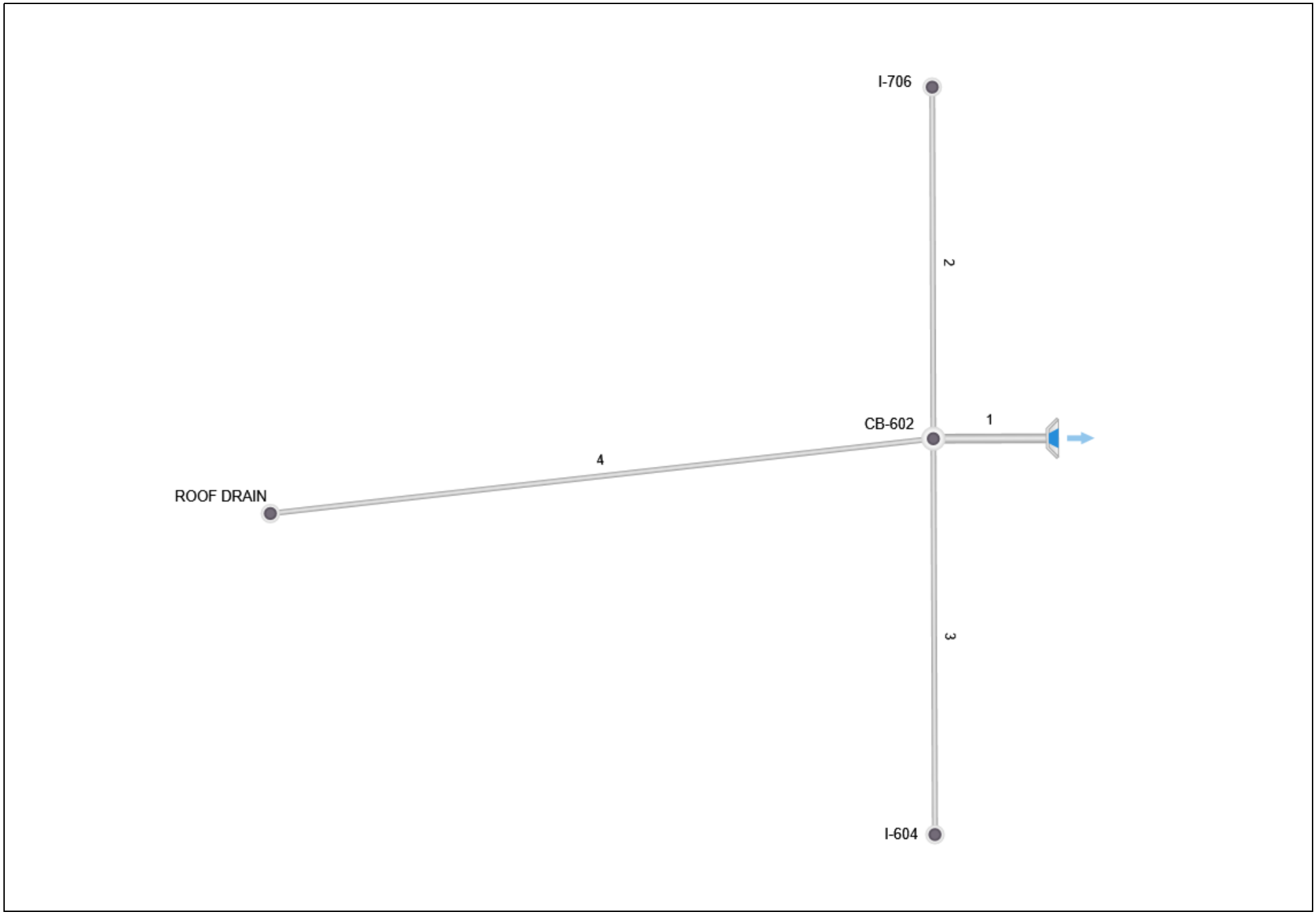
Plan View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-11-2021



0.sws

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Storm Sewer Tabulation

Project Name: Enter Project Name...

Stormwater Studio 2020 v 3.0.0.22

01-11-2021

Line ID	Length	Drng Area		Rational	C x A		Tc		Intensity	Total Q	Capacity	Velocity	Line		Invert Elev		HGL Elev		Surface Elev		Line No
		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
	(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
E-600-CB-602	23.14	0.260	0.830	0.90	0.23	0.75	10.0	10.43	6.66	4.98	18.21	4.29	24	0.65	724.15	724.00	724.95	724.79	731.30	729.20	1
CB-602-I-706	72.06	0.170	0.170	0.90	0.15	0.15	10.0	10.00	6.78	1.04	3.75	3.19	12	1.11	728.10	727.30	728.53	727.73	731.30	731.30	2
CB-602-I-604	81.15	0.080	0.080	0.90	0.07	0.07	10.0	10.00	6.78	0.49	3.54	2.51	12	0.99	728.10	727.30	728.40	727.60	731.30	731.30	3
CB-602-ROOF DRAIN	136.62	0.320	0.320	0.90	0.29	0.29	10.0	10.00	6.78	1.95	6.18	4.03	12	3.01	731.50	727.39	732.09	727.98	736.50	731.30	4

Notes: IDF File = BULL 75Modified-2020.idf, Return Period = 10-yrs.

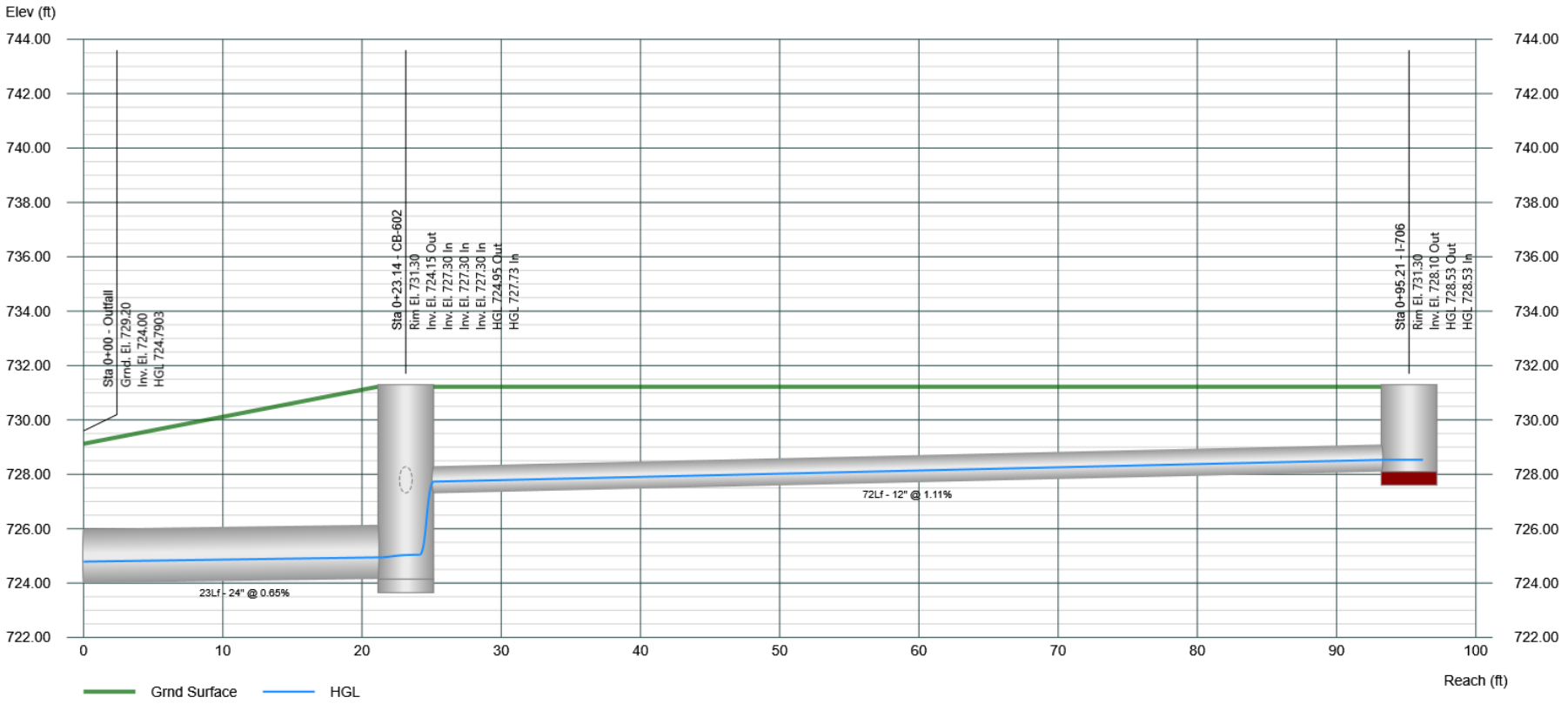
Project File: SYSTEM-600.sws

Profile View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-11-2021

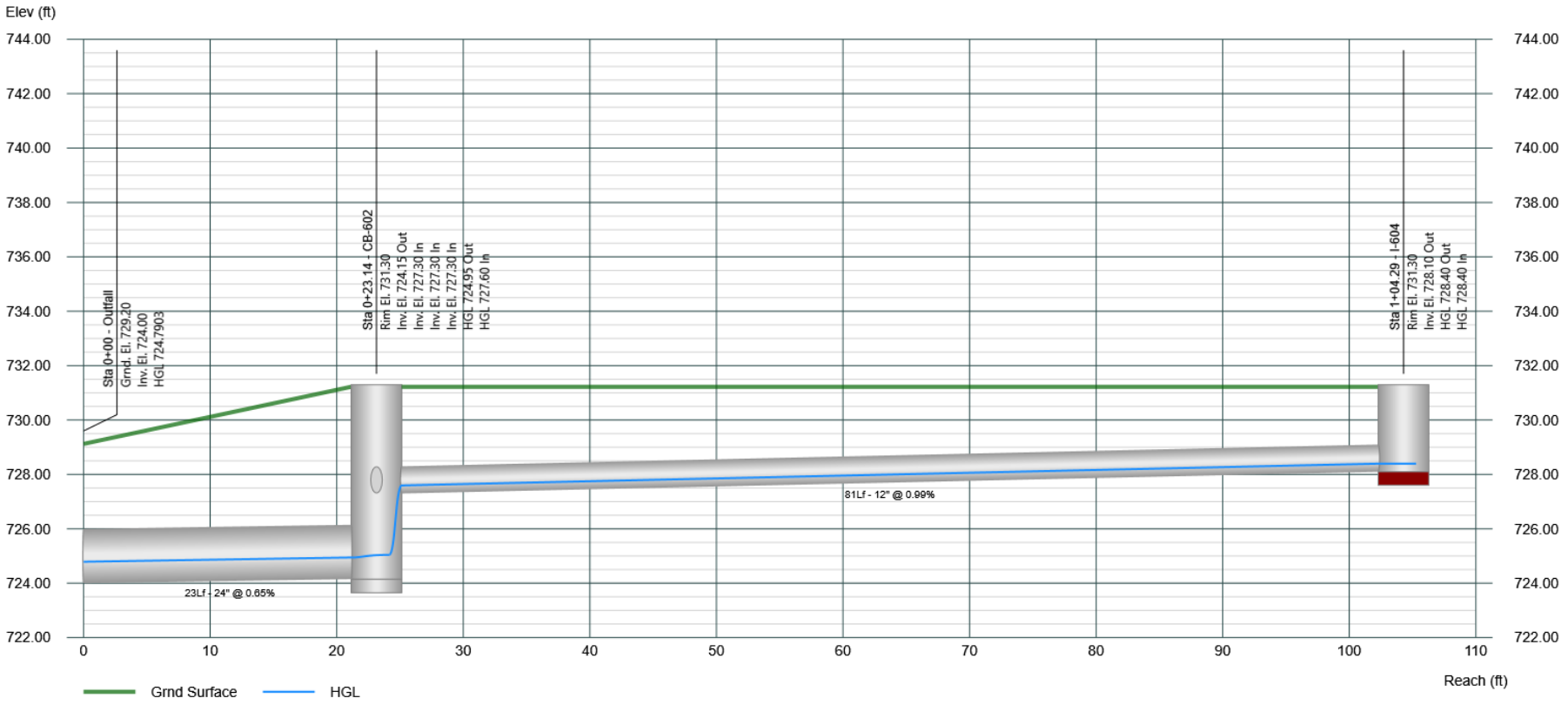


Profile View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-11-2021



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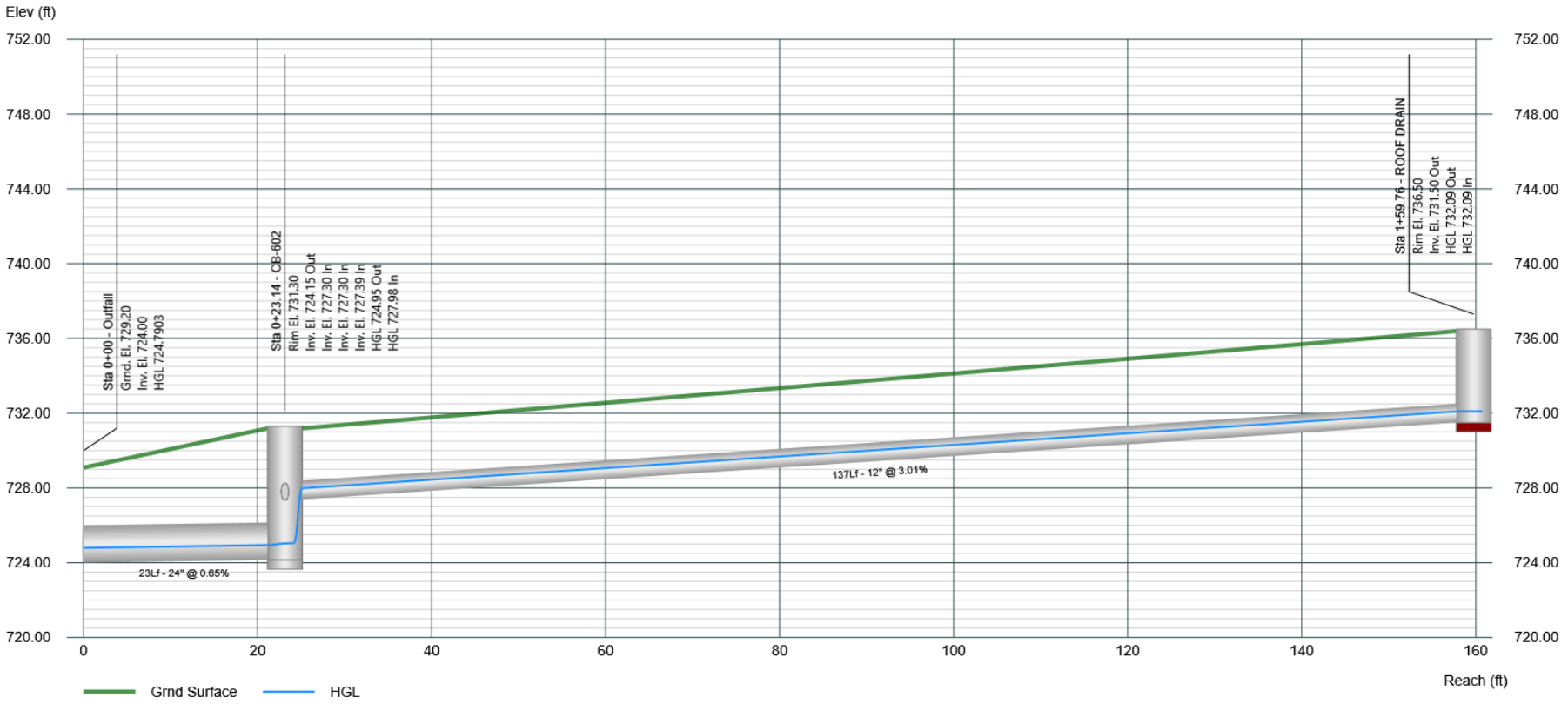
Profile View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-11-2021



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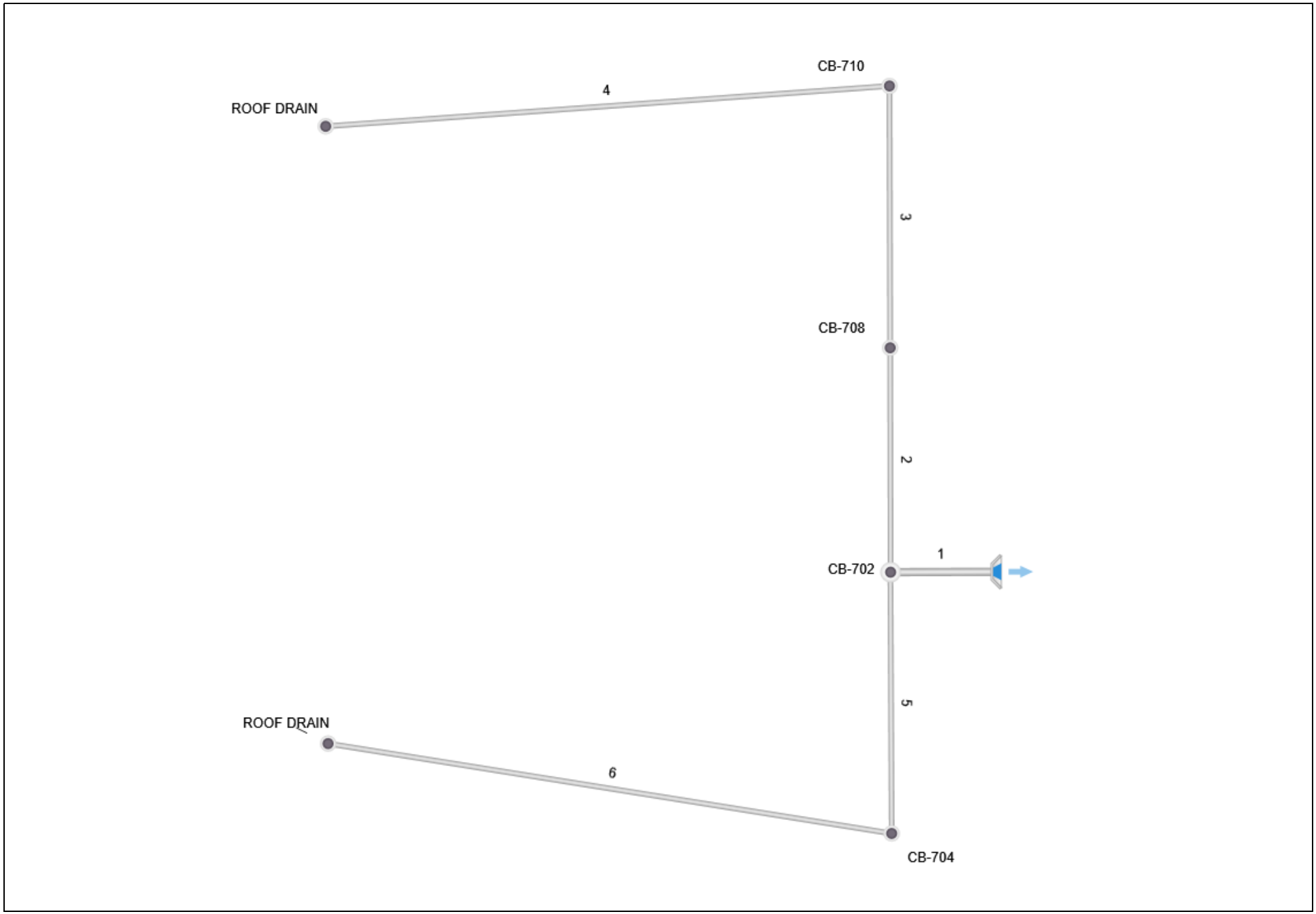
Plan View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-11-2021



0.sws

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Storm Sewer Tabulation

Project Name: Enter Project Name...

Stormwater Studio 2020 v 3.0.0.22

01-11-2021

Line ID	Length	Drng Area		Rational	C x A		Tc		Intensity	Total Q	Capacity	Velocity	Line		Invert Elev		HGL Elev		Surface Elev		Line No
		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
	(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
E-700-CB-702	24.20	0.180	1.350	0.90	0.16	1.22	10.0	10.71	6.59	8.01	17.81	5.07	24	0.62	724.15	724.00	725.16	725.00	731.30	729.20	1
CB-702-CB-708	54.08	0.180	0.680	0.90	0.16	0.61	10.0	10.55	6.63	4.06	4.08	5.68	12	1.31	727.45	726.74	728.30	727.59	731.30	731.30	2
CB-708-CB-710	63.10	0.180	0.500	0.90	0.16	0.45	10.0	10.35	6.69	3.01	3.61	3.83	12	1.03	728.10	727.45	729.09	728.67	731.30	731.30	3
CB-710-ROOF DRAIN	136.09	0.320	0.320	0.90	0.29	0.29	10.0	10.00	6.78	1.95	5.63	3.26	12	2.50	731.50	728.10	732.09	729.41	736.50	731.30	4
CB-702-CB-704	62.93	0.190	0.490	0.90	0.17	0.44	10.0	10.36	6.68	2.95	3.62	4.81	12	1.03	728.10	727.45	728.83	728.18	731.30	731.30	5
CB-704-ROOF DRAIN	137.42	0.300	0.300	0.90	0.27	0.27	10.0	10.00	6.78	1.83	5.60	3.13	12	2.47	731.50	728.10	732.07	729.14	736.50	731.30	6

Notes: IDF File = BULL 75Modified-2020.idf, Return Period = 10-yrs.

Project File: SYSTEM-700.sws

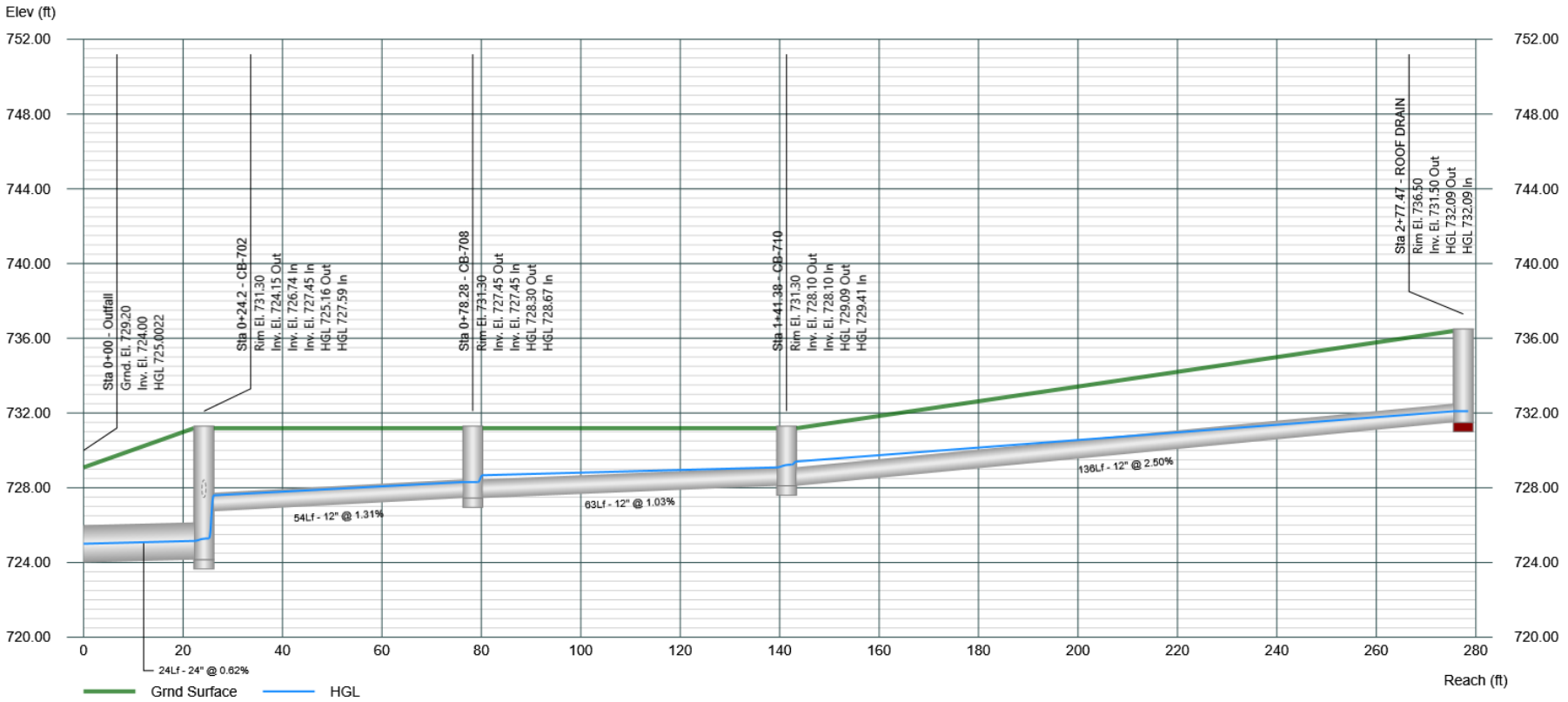
Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Profile View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-11-2021



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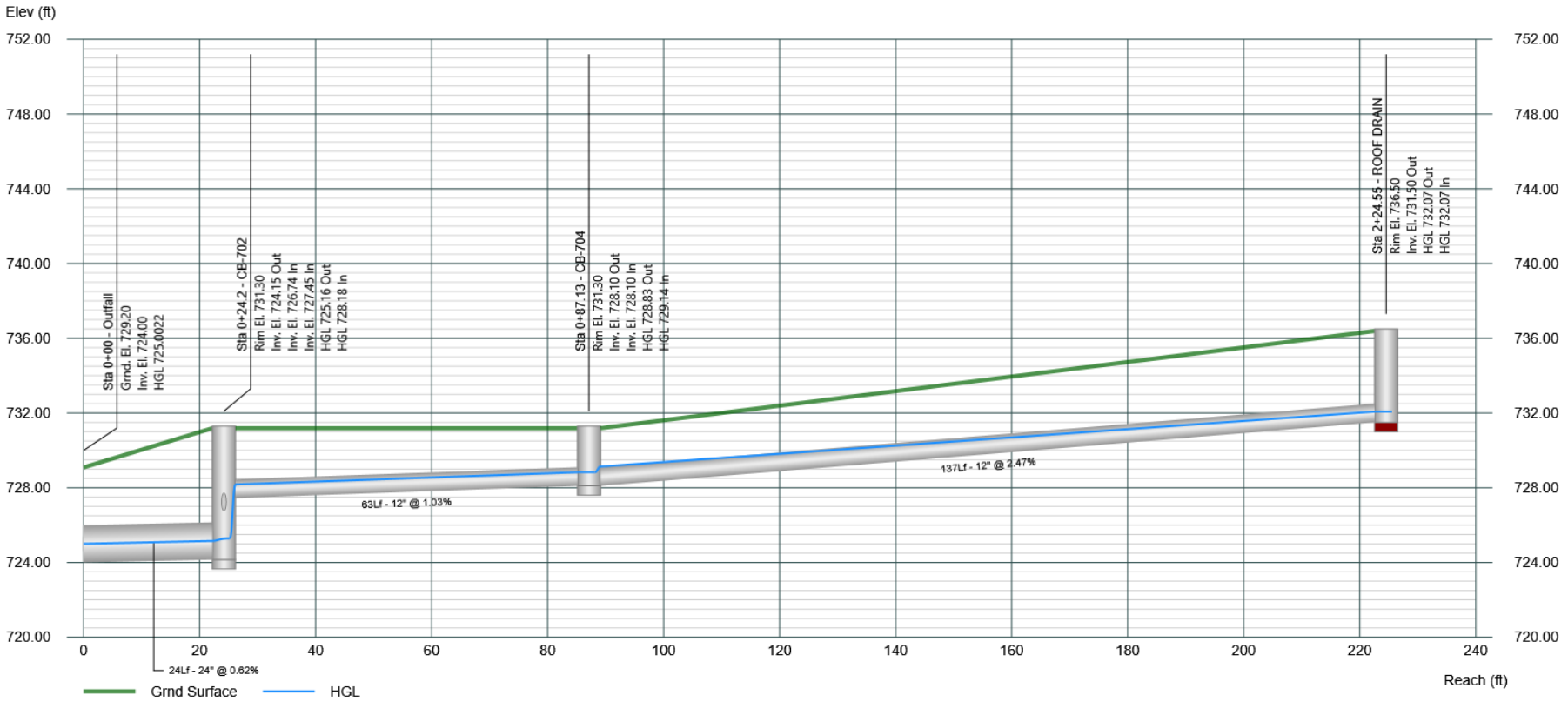
Profile View

Stormwater Studio 2020 v 3.0.0.22

Project Name: Enter Project Name...

01-11-2021



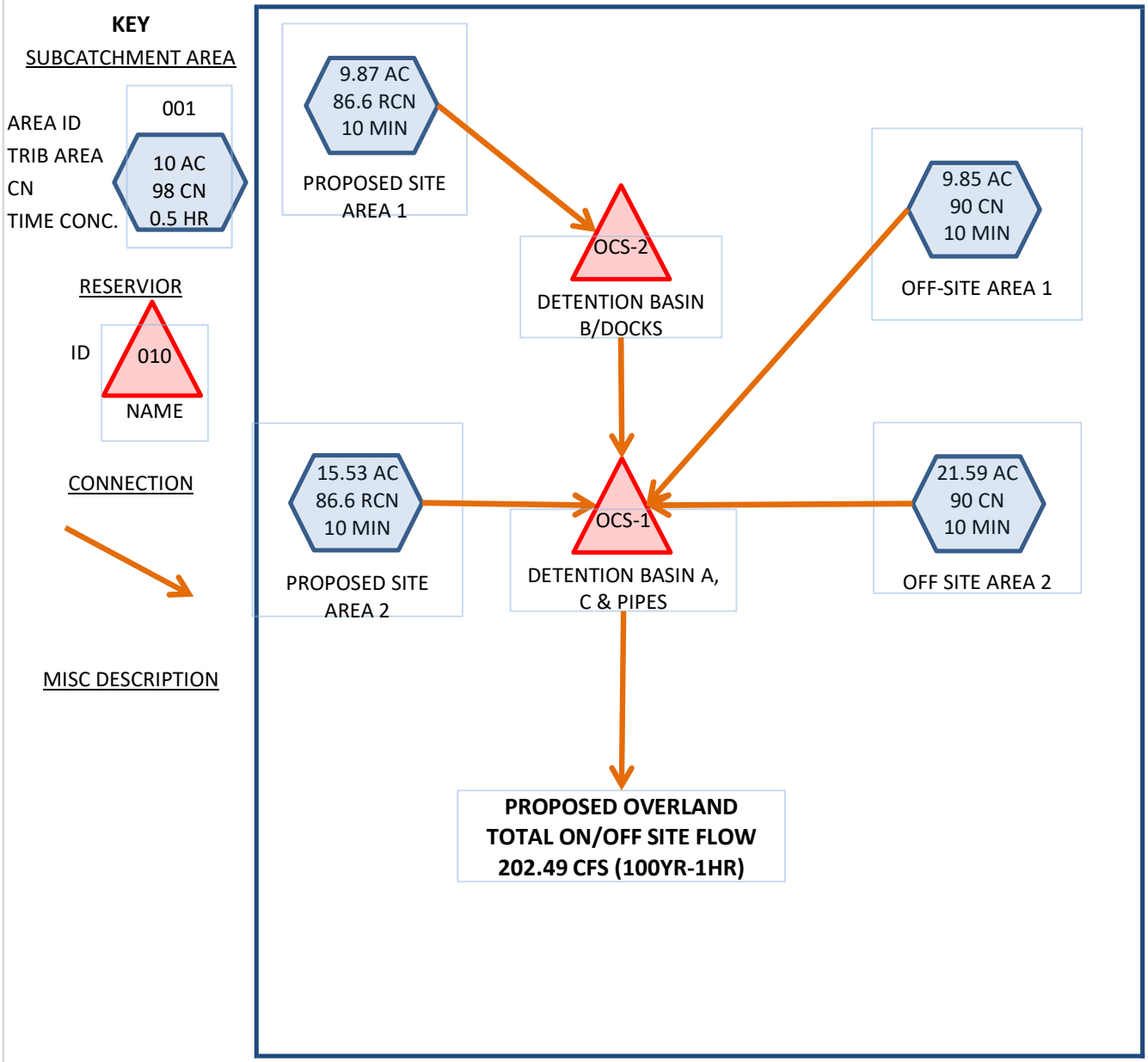
0.sws

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **HEC-HMS ROUTING DIAGRAM**
DESCRIPTION: PEAK FLOWS - PROPOSED CONDITIONS (See PDP Exhibit)
SITE CONDITION: PROPOSED



Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SPACECO INC.
CONSULTING ENGINEERS
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LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **HEC-HMS RESULTS PROPOSED PEAK FLOW**
DESCRIPTION: PROPOSED
STORM EVENT 100 YEAR
DURATTION 1 HR

N:\Projects\11061\DRAINAGE\2021-0111 FINAL\HEC-HMS\PROPOSED

Project: Development Template Simulation Run: 100YR__1HR

Start of Run: 01Jan2000, 00:00 Basin Model: Development Template
End of Run: 03Jan2000, 00:00 Meteorologic Model: 100YR_1HR
Compute Time: 12Jan2021, 13:37:00 Control Specifications: _1HR

Show Elements: All Elements Volume Units: (•) IN ( ) ACRE-FT Sorting: Hydrologic

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Development	0.0397	139.14	01Jan2000, 00:20	2.63
Upstream Tributary	0.049125	116.45	01Jan2000, 00:34	2.66
Overflow Weir	0.088825	202.49	01Jan2000, 00:24	2.65
Detained Area-1	0.015422	54.05	01Jan2000, 00:20	2.63
Detained Area-2	0.024266	85.05	01Jan2000, 00:20	2.63
Detention-1 (OCS-2)	0.015422	4.81	01Jan2000, 01:07	2.63
Detention-2 (OCS-1)	0.039688	3.91	01Jan2000, 02:53	2.63
Gross Release Rate	0.039688	3.91	01Jan2000, 02:53	2.63

STORM EVENT	PEAK FLOW RATE (CFS)
100-year, 1-hour	202.49
100-year, 2-hour	189.84
100-year, 3-hour	167.35
100-year, 6-hour	111.14
100-year, 12-hour	69.79
100-year, 18-hour	51.75
100-year, 24-hour	41.52
100-year, 48-hour	27.96

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

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Phone: (847) 696-4060 Fax: (847) 696-4065

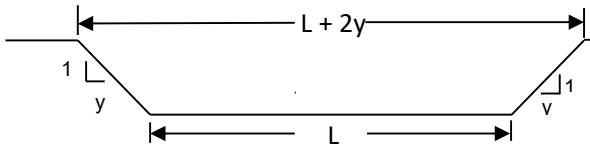
PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **EMERGENCY OVERFLOW WEIR - BASIN C**
DESCRIPTION: EMERGENCY OVERFLOW WEIR - BASIN C
SITE CONDITION: PROPOSED

OVERFLOW WEIR DESIGN

- Size Q_{100} from site detention Area plus Q_{100} from Tributary Offsite Area

Q_{100} INFLOW PEAK= **202.49** CFS From HEC-HMS



TOP OF BERM 730.2 ELEV

OVERFLOW 729.2 ELEV

VARIABLES

L =	70	FT	(LENGTH)
Y =	4	FT	(SIDESLOPE)
H =	1.0	FT	

USE WEIR FORMULA

$$Q = CLH^{1.5}$$

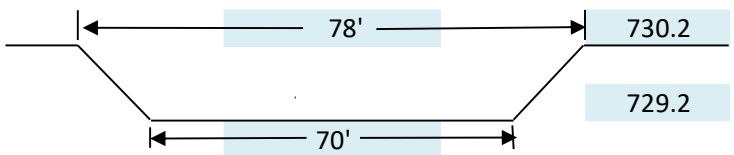
L= 70.00 C = 3.0

Q_{100YR} REQUIRED = 202.49 CFS

Q_{100YR} PROVIDED = 210.00 CFS **210.00 CFS**

Q_{100} PROV. > Q_{100} REQ. TRUE

DESIGNED WEIR:



Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

TAB 4

STORMWATER MANAGEMENT PERMIT APPLICATION
FOR
PALATINE CORPORATE CENTER
PALATINE, COOK COUNTY, IL

PREPARED FOR
PANATTONI DEVELOPMENT COMPANY

PREPARED BY
SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018

SPACECO PROJECT # 11061

JANUARY 2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **VOLUME CONTROL STORAGE**
DESCRIPTION: BMP STORAGE REQUIRED
SITE CONDITION: PROPOSED

IMPERVIOUS AREAS

- DEVELOPMENT 19.00 ACRES
  (SEE CN CALCULATION)
- FUTURE DEVELOPMENT 0 ACRES
  (SEE CN CALCULATION FOR FUTURE AREA))

TOTAL IMPERVIOUS 19.00 ACRES

REQURIED DEPTH 1 INCHES

TOTAL VOLUME REQ'D = 1.58 AC-FT

IMPERVIOUS REDUCTION FROM EXISTING = 0.0%

VOLUME CONTROL CREDIT = 0.00

ACTUAL VOLUME REQ'D= 1.58 AC-FT

DESCRIPTION	ELEV FT	AREA S.F.	AVG. AREA S.F.	D ELEV FT	VOLUME C.F.	VOLUME C.Y.	VOLUME ACRE-FT	ΣVOL. ACRE-FT
BELOW OUTLET BASIN A								
BOTTOM	724.00	17,047						
NWL	725.00	19,037	18,042	1.0	18,042	668	0.41	0.41
BELOW OUTLET BASIN B								
BOTTOM	727.50	1,890						
NWL	728.50	2,539	2,215	1.0	2,215	82	0.05	0.05
BELOW OUTLET BASIN C								
BOTTOM	723.00	28,264						
NWL	724.00	30,979	29,622	1.0	29,622	1,097	0.68	0.68
BIORETENTION FACILITY BELOW BASIN B (TRUCK DOCK)								
BOTTOM	727.50	12,704						
NWL	728.50	17,074	14,889	1.0	14,889	551	0.34	0.34
SOIL MEDIA AND COARSE AGG. VOL.								0.11

TOTAL VOLUME= 1.59 AC-FT.

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

TAB 5

STORMWATER MANAGEMENT PERMIT APPLICATION
FOR
PALATINE CORPORATE CENTER
PALATINE, COOK COUNTY, IL

PREPARED FOR
PANATTONI DEVELOPMENT COMPANY

PREPARED BY
SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018

SPACECO PROJECT # 11061

JANUARY 2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **SIZE RESTRICTOR (SINGLE STAGE) - THEORETICAL**
DESCRIPTION: TOTAL SITE AREA DETENTION ONLY
SITE CONDITION: PROPOSED

					NOTES
1)	TOTAL DEVELOPMENT AREA		25.40	ACRES	
2)	ALLOWABLE RELEASE RATE		0.20	CFS/ACRE	
3)	TOTAL ALLOWABLE RELEASE		5.08	CFS	
4)	UNRESTRICTED ALLOWABLE RELEASE RATE		0.00		100 YR - 24HR EVENT (SEE DRAINAGE MODEL)
5)	ACTUAL ALLOWABLE RELEASE		5.08	CFS	
6)	RESTRICTOR SIZE		9.4	IN	1 # OPENINGS
7)	AREA OF RESTRICTOR		0.48	SF	
8)	HIGH WATER LEVEL BASIN		529.00	FT	
9)	INVERT OF ORIFICE (OR NWL)		524.00	FT	
10)	HEAD	UNSUBMERGED ORIFICE	4.61	FT	X TYPE IN X TO SELECT
		SUBMERGED ORFICE		FT	
11)	DISCHARGE @ HIGH WATER LEVEL (HWL)		5.06	CFS	

$Q = C \times A \times (2gh)^{0.5}$

g = 32.2
C = 0.61

RESTRICTOR DESIGN MEETS RELEASE REQUIREMENTS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **STAGE DISCHARGE TABLE - THEORETICAL**
DESCRIPTION: **SITE DEVELOPMENT AREA**
SITE CONDITION: PROPOSED - MWRD

ORIFICE, C	0.61		
OUTLET ELEVATION	***524.00***	***FT***	
PIPE/OPENING SIZE	9.4	IN	
# OPENINGS	1	EACH	
TOTAL AREA OPENING	0.48	S.F.	
OVERFLOW ELEVATION	629.0	FT	(C =3.0)
WEIR COEFFICIENT	3.0		

NOTES:
1) N = 0.013
2) Orfice Equation = $CA(2gh)^{0.5}$
3) h is measured to center of orfice
4) Weir equation is $Q = CLH^{3/2}$ (assumes rectangular)

DESCRIPTION	ELEV FT	ORFICE Q, FLOW CFS	WEIR LENGTH @ ELEVATION FT	WEIR Q, FLOW CFS	FLOW TOTAL CFS	NOTES
NWL	524.00	0.00			0.00	START OUTLET PIPE FLOW
	524.50	0.78			0.78	
	525.00	1.84			1.84	
	525.50	2.48			2.48	
	526.00	2.99			2.99	
	526.50	3.42			3.42	
	527.00	3.81			3.81	
	527.50	4.16			4.16	
	528.00	4.48			4.48	
	528.50	4.78			4.78	
HWL	529.00	5.06			5.06	

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE:	**HEC-HMS RESULTS DETENTION REQUIRED ONLY**
DESCRIPTION:	PROPOSED
STORM EVENT	100 YEAR
DURATTION	24HR

N:\Projects\11061\DRAINAGE\2021-0111 FINAL\HEC-HMS\DETENTION-REQUIRED

Project: Development Template Simulation Run: 100YR_24HR
Reservoir: Detention Facility

Start of Run:	01Jan2000, 00:00	Basin Model:	Development Template
End of Run:	03Jan2000, 00:00	Meteorologic Model:	100YR24HR
Compute Time:	08Jan2021, 09:31:37	Control Specifications:	24HR

Volume Units: ○ IN ◉ ACRE-FT

Computed Results

Peak Inflow:	18.56 (CFS)	Date/Time of Peak Inflow:	01Jan2000, 16:00
Peak Discharge:	5.05 (CFS)	Date/Time of Peak Discharge:	01Jan2000, 20:13
Inflow Volume:	14.73 (ACRE-FT)	Peak Storage:	10.01 (ACRE-FT)
Discharge Volume:	12.20 (ACRE-FT)	Peak Elevation:	728.98 (FT)

Basin Name: Development Template
Element Name: Detained Area
Description:
Downstream: Detention Facility
*Area (MI2) 0.0397

Basin Name: Development Template
Element Name: Detained Area
Initial Abstraction (IN)
*Curve Number: 86.60
*Impervious (%) 0.0

Basin Name: Development Template
Element Name: Detained Area
Graph Type: Standard (PRF 484)
*Lag Time (MIN) 6

Elevation (FT)	Storage (ACRE-FT)	Discharge (CFS)
724.00	0.000	0.00
724.50	1.000	0.78
725.00	2.000	1.84
725.50	3.000	2.48
726.00	4.000	2.99
726.50	5.000	3.43
727.00	6.000	3.81
727.50	7.000	4.16
728.00	8.000	4.48
728.50	9.000	4.78
729.00	10.050	5.06

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE:	**HEC-HMS RESULTS DETENTION REQUIRED ONLY**
DESCRIPTION:	PROPOSED
STORM EVENT	100 YEAR
DURATTION	24HR

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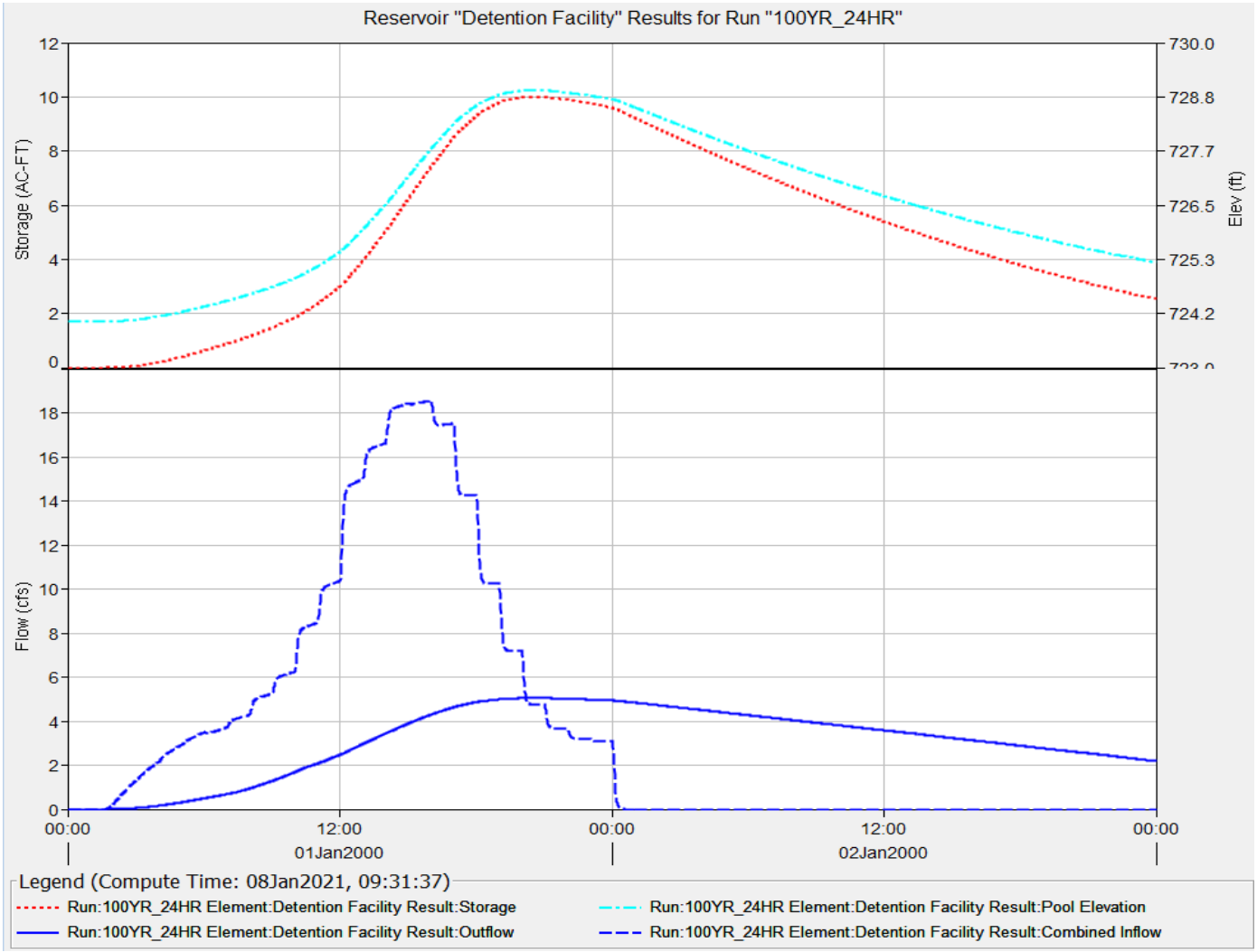

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **AREA 1 SIZE RESTRICTOR (SINGLE STAGE)**
DESCRIPTION: AREA 1 (OCS-2)
SITE CONDITION: PROPOSED

					NOTES
1)	TOTAL AREA		9.87	ACRES	
2)	RESTRICTOR SIZE		8.5	IN	1 # OPENINGS
7)	AREA OF RESTRICTOR		0.39	SF	
8)	HIGH WATER LEVEL BASIN		731.10	FT	
9)	INVERT OF ORIFICE (OR NWL)		726.00	FT	
10)	HEAD	UNSUBMERGED ORIFICE		FT	TYPE IN X TO SELECT
		SUBMERGED ORFICE	4.75	FT	X
11)	DISCHARGE @ HIGH WATER LEVEL (HWL)		**4.20**	CFS	

$Q = C \times A \times (2gh)^{0.5}$

g = 32.2
C = 0.61

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **PROPOSED RESTRICTOR SIZE (SINGLE STAGE)**
DESCRIPTION: TOTAL DEVELOPMENT AREA (OCS-1)
SITE CONDITION: PROPOSED

					NOTES
1)	AREA 1		9.87	ACRES	
2)	AREA 2		15.53	ACRES	
3)	TOTAL DEVELOPMENT AREA		25.40	ACRES	
4)	ALLOWABLE RELEASE RATE		0.2	CFS/ACRE	
5)	TOTAL ALLOWABLE RELEASE		5.08	CFS	
6)	NATIVE PLANT ALLOWABLE RELEASE RATE		0.00	CFS	(100 YEAR - 24 HR)
7)	UNRESTRICTED ALLOWABLE RELEASE RATE				100 YR - 24HR EVENT (SEE DRAINAGE MODEL)
8)	ACTUAL ALLOWABLE RELEASE		5.08	CFS	
9)	RESTRICTOR SIZE		8.70	IN	1 # OPENINGS
10)	AREA OF RESTRICTOR		0.41	SF	
11)	HIGH WATER LEVEL BASIN		729.20	FT	
12)	INVERT OF ORIFICE (OR NWL)		722.60	FT	
13)	HEAD	UNSUBMERGED ORIFICE	6.24	FT	X TYPE IN X TO SELECT
		SUBMERGED ORFICE		FT	
14)	DISCHARGE @ HIGH WATER LEVEL (HWL)		5.04	CFS	

$Q = C \times A \times (2gh)^{0.5}$
g = 32.2
C = 0.61

RESTRICTOR DESIGN MEETS RELEASE REQUIREMENTS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **AREA 1 STAGE DISCHARGE TABLE (SINGLE ELEVATION RESTRICTOR)**
DESCRIPTION: AREA 1 (OCS-2)
SITE CONDITION: PROPOSED

ORFICE, C	0.61		
OUTLET ELEVATION	***726.00***	***FT***	
PIPE/OPENING SIZE	8.5	IN	
# OPENINGS	1	EACH	
TOTAL AREA OPENING	0.394	S.F.	
OVEFLOW ELEVATION	730.8	FT	(C = 2.6)
WEIR COEFFICIENT	3.0		

NOTES:
1) N = 0.013
2) Orfice Equation = $CA(2gh)^{0.5}$
3) h is measured to center of orfice
4) Weir equation is $Q = CLH^{3/2}$ (assumes rectangular)

DESCRIPTION	ELEV FT	ORFICE Q, FLOW CFS	WEIR LENGTH @ ELEVATION FT	WEIR Q, FLOW CFS	FLOW TOTAL CFS	NOTES
INVERT	726.00	0.000			0.000	START PIPE OUTFLOW
NWL	728.50	2.824			2.824	
	729.50	3.420			3.420	
	730.10	3.732			3.732	
	730.60	3.973			3.973	
HWL	731.10	4.200	3.00	1.48	5.679	

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **TOTAL STAGE DISCHARGE TABLE (SINGLE ELEVATION RESTRICTOR)**
DESCRIPTION: TOTAL DEVELOPMENT AREA (OCS-1)
SITE CONDITION: PROPOSED

ORFICE, C	0.61	
OUTLET ELEVATION	***722.60***	***FT***
PIPE/OPENING SIZE	8.70	IN
# OPENINGS	1	EACH
TOTAL AREA OPENING	0.413	S.F.
OVEFLOW ELEVATION	729.2	FT (C = 2.6)
WEIR COEFFICIENT	3.0	

NOTES:
1) N = 0.013
2) Orfice Equation = $CA(2gh)^{0.5}$
3) h is measured to center of orfice
4) Weir equation is $Q = CLH^{3/2}$ (assumes rectangular)

DESCRIPTION	ELEV FT	ORFICE Q, FLOW CFS	WEIR LENGTH @ ELEVATION FT	WEIR Q, FLOW CFS	FLOW TOTAL CFS	NOTES
INVERT	722.60	0.000			0.000	START PIPE OUTFLOW
	724.00	2.057			2.057	
	725.00	2.883			2.883	
	726.00	3.520			3.520	
	727.00	4.059			4.059	
	728.00	4.533			4.533	
HWL	729.20	5.045			5.045	

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9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT: PALATINE CORPORATE CENTER
LOCATION: PALATINE, IL

PROJECT #: 11061
DATE: January-21
LAST REVISED:

CALCULATION TITLE: VOLUME CALCULATION PROVIDED
DESCRIPTION: VOLUME A BASIN
SITE CONDITION: PROPOSED

DESCRIPTION	ELEV FT	AREA S.F.	AVG. AREA S.F.	D ELEV FT	VOLUME C.F.	VOLUME C.Y.	VOLUME ACRE-FT	ΣVOL. ACRE-FT
NWL	725.00	19,038						
			20,062	1.0	20,062	743	0.46	0.46
	726.00	21,085						
			22,137	1.0	22,137	820	0.51	0.97
	727.00	23,189						
			24,266	1.0	24,266	899	0.56	1.53
	728.00	25,343						
			26,680	1.2	32,015	1,186	0.73	2.26
HWL	729.20	28,016						

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT: PALATINE CORPORATE CENTER
LOCATION: PALATINE, IL

PROJECT #: 11061
DATE: January-21
LAST REVISED:

CALCULATION TITLE: VOLUME CALCULATION PROVIDED
DESCRIPTION: VOLUME B DOCK/BASIN
SITE CONDITION: PROPOSED

DESCRIPTION	ELEV FT	AREA S.F.	AVG. AREA S.F.	D ELEV FT	VOLUME C.F.	VOLUME C.Y.	VOLUME ACRE-FT	ΣVOL. ACRE-FT
NWL	728.50	12,702						
			17,096	1.0	17,096	633	0.39	0.39
	729.50	21,489						
			23,724	0.6	14,234	527	0.33	0.72
EOP	730.10	25,959						
			41,191	0.5	20,596	763	0.47	1.19
6" PONDING	730.60	56,423						
			71,863	0.5	35,931	1,331	0.82	2.02
HWL 12" PONDING	731.10	87,302						

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **VOLUME CALCULATION PROVIDED**
DESCRIPTION: VOLUME B BASIN
SITE CONDITION: PROPOSED

DESCRIPTION	ELEV FT	AREA S.F.	AVG. AREA S.F.	D ELEV FT	VOLUME C.F.	VOLUME C.Y.	VOLUME ACRE-FT	ΣVOL. ACRE-FT
NWL	728.50	2,540						
			3,017	1.0	3,017	112	0.07	0.07
	729.50	3,494						
			4,022	1.1	4,424	164	0.10	0.17
	730.60	4,549						
			5,033	0.5	2,516	93	0.06	0.23
HWL	731.10	5,516						

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT: PALATINE CORPORATE CENTER
LOCATION: PALATINE, IL

PROJECT #: 11061
DATE: January-21
LAST REVISED:

CALCULATION TITLE: VOLUME CALCULATION PROVIDED
DESCRIPTION: VOLUME C BASIN
SITE CONDITION: PROPOSED

DESCRIPTION	ELEV FT	AREA S.F.	AVG. AREA S.F.	D ELEV FT	VOLUME C.F.	VOLUME C.Y.	VOLUME ACRE-FT	ΣVOL. ACRE-FT
NWL	724.00	30,980						
			32,353	1.0	32,353	1,198	0.74	0.74
	725.00	33,725						
			35,126	1.0	35,126	1,301	0.81	1.55
	726.00	36,527						
			37,957	1.0	37,957	1,406	0.87	2.42
	727.00	39,386						
			40,844	1.0	40,844	1,513	0.94	3.36
	728.00	42,301						
			44,088	1.2	52,905	1,959	1.21	4.57
HWL	729.20	45,874						

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **DETENTION STORAGE VOLUME CALCULATION**
DESCRIPTION: PIPE STORAGE 36" PIPE & ARCH PIPE
SITE CONDITION: PROPOSED

ON-SITE PIPE STORAGE 36" PIPE

$CROSS\ SECTIONIONAL\ AREA\ A = \pi(\frac{D}{2})^2$

PIPE DIAMETER	D=	36	INCHES
PIPE AREA	A=	7	SQUARE FEET
LENGTH	L=	927	FEET
VOLUME	V=	6,549	CUBIC FEET
	V=	0.15	ACRE-FEET

ON-SITE PIPE STORAGE ARCH PIPE

STORAGE PROVIDED BY CONTECH

PIPE DATA	H=	81	INCH
	W=	59	INCH
UNIT PIPE STORAGE	V=	26.15	CF/LF
LENGTH	L=	1,047	FEET
UNIT BACKFILL STO.	V=	6.86	CF/LF
LENGTH	L=	1,047	FEET
VOLUME PIPE	V=	27,379	CF
VOLUME BACKFILL	V=	7,183	CF
TOTAL STORAGE	V=	34,563	CF
TOTAL STORAGE	V=	0.79	ACRE-FEET

TOTAL STORAGE PROVD IN PIPES

TOTAL STORAGE	V=	**0.94**	ACRE-FEET

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

PROJECT: PALATINE CORPORATE CENTER
LOCATION: PALATINE, IL

PROJECT #: 11061
DATE: 1/11/2021
LAST REVISED:

CALCULATION TITLE: PROPOSED OVERALLL RATING CURVE
DESCRIPTION: SEE ENGINEERING PLANS
SITE CONDITION: PROPOSED

		FLOWS			VOLUMES							
DESCRIPTION	ELEV FT	OCS 1	TOTAL OCS 2		BASIN B BASIN	BASIN B DOCK	ΣTOTAL	BASIN A	BASIN C	PIPE	ΣTOTAL	ΣTOTAL
INVERT	723.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00		0.00	0.00
NWL BASIN C	724.00	0.00	2.06		0.00	0.00	0.00	0.00	0.00		0.00	0.00
NWL BASIN A	725.00	0.00	2.88		0.00	0.00	0.00	0.00	0.74	0.16	0.90	0.90
	726.00	0.00	3.52		0.00	0.00	0.00	0.46	0.81	0.21	2.38	2.38
	727.00	0.00	4.06		0.00	0.00	0.00	0.51	0.87	0.21	3.96	3.96
	728.00	0.00	4.53		0.00	0.00	0.00	0.56	0.94	0.21	5.67	5.67
NWL BASIN B	728.50	2.82			0.00	0.00	0.00				5.67	5.67
HWL A & C	729.20		5.04		0.00	0.00	0.00	0.73	1.21	0.16	7.77	7.77
	729.50	3.42			0.07	0.39	0.46				7.77	8.24
EOP	730.10	3.73				0.33	0.79				7.77	8.56
6"	730.60	3.97			0.10	0.47	1.36				7.77	9.14
HWL B/DOCK	731.10	5.68			0.06	0.82	2.25				7.77	10.02

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S.

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **HEC-HMS RESULTS DETENTION PROPOSED PEAK**
DESCRIPTION: PROPOSED OCS-2
STORM EVENT 100 YEAR
DURATTION 18HR

N:\Projects\11061\DRAINAGE\2021-0111 FINAL\HEC-HMS\PROPOSED

Project: Development Template Simulation Run: 100YR_18HR
Reservoir: Detention-1 (OCS-2)

Start of Run:	01Jan2000, 00:00	Basin Model:	Development Template
End of Run:	03Jan2000, 06:00	Meteorologic Model:	100YR18HR
Compute Time:	08Jan2021, 10:18:52	Control Specifications:	18HR

Volume Units: ○ IN ◉ ACRE-FT

Computed Results

Peak Inflow:	8.99 (CFS)	Date/Time of Peak Inflow:	01Jan2000, 12:00
Peak Discharge:	4.74 (CFS)	Date/Time of Peak Discharge:	01Jan2000, 14:05
Inflow Volume:	5.31 (ACRE-FT)	Peak Storage:	1.76 (ACRE-FT)
Discharge Volume:	5.31 (ACRE-FT)	Peak Elevation:	730.83 (FT)

Basin Name: Development Template
Element Name: Detained Area-1
Description:
Downstream: Detention-1 (OCS-2)
*Area (MI2) 0.015422

Basin Name: Development Template
Element Name: Detained Area-1
Initial Abstraction (IN)
*Curve Number: 86.60
*Impervious (%) 0.0

Basin Name: Development Template
Element Name: Detained Area-1
Graph Type: Standard (PRF 484)
*Lag Time (MIN) 6

Elevation (FT)	Storage (ACRE-FT)	Discharge (CFS)
726.00	0.000	0.000
728.50	0.010	2.824
729.50	0.460	3.420
730.10	0.790	3.732
730.60	1.360	3.973
731.10	2.250	5.679

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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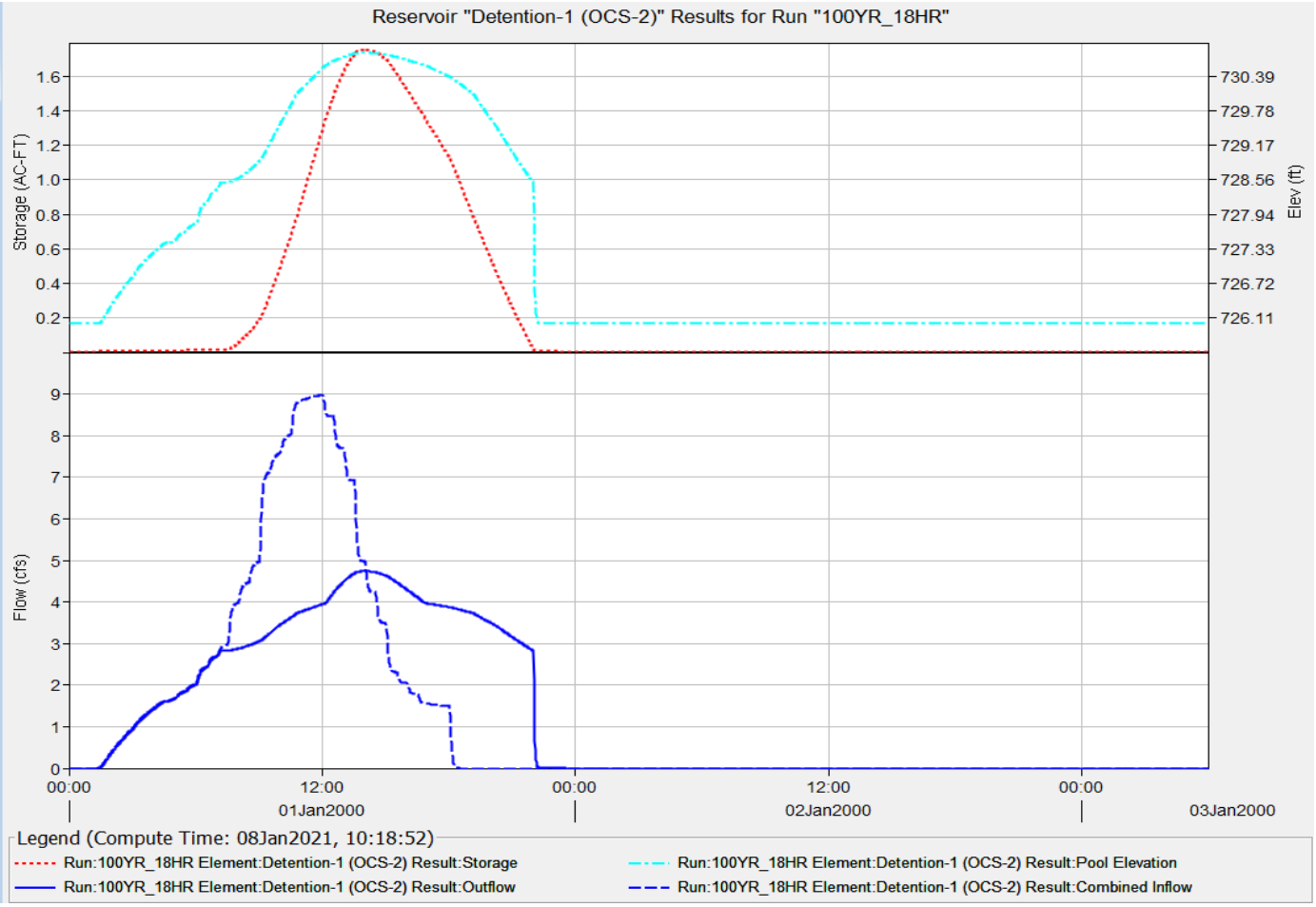
PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE:	**HEC-HMS RESULTS DETENTION PROPOSED PEAK**
DESCRIPTION:	PROPOSED-OCS-2
STORM EVENT	100 YEAR
DURATTION	18HR

N:\Projects\11061\DRAINAGE\2021-0111 FINAL\HEC-HMS\PROPOSED



Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE: **HEC-HMS RESULTS DETENTION PROPOSED PEAK**
DESCRIPTION: PROPOSED OCS-1
STORM EVENT 100 YEAR
DURATTION 18HR

N:\Projects\11061\DRAINAGE\2021-0111 FINAL\HEC-HMS\PROPOSED

Project: Development Template Simulation Run: 100YR_18HR
Reservoir: Detention-2 (OCS-1)

Start of Run:	01Jan2000, 00:00	Basin Model:	Development Template
End of Run:	03Jan2000, 06:00	Meteorologic Model:	100YR18HR
Compute Time:	08Jan2021, 10:18:52	Control Specifications:	18HR

Volume Units: ○ IN ◉ ACRE-FT

Computed Results

Peak Inflow:	18.08 (CFS)	Date/Time of Peak Inflow:	01Jan2000, 12:00
Peak Discharge:	5.04 (CFS)	Date/Time of Peak Discharge:	01Jan2000, 18:07
Inflow Volume:	13.68 (ACRE-FT)	Peak Storage:	7.76 (ACRE-FT)
Discharge Volume:	13.68 (ACRE-FT)	Peak Elevation:	729.19 (FT)

Basin Name: Development Template
Element Name: Detained Area-2
Description:
Downstream: Detention-2 (OCS-1)
*Area (MI2) 0.024266

Basin Name: Development Template
Element Name: Detained Area-2
Initial Abstraction (IN)
*Curve Number: 86.60
*Impervious (%) 0.0

Basin Name: Development Template
Element Name: Detained Area-2
Graph Type: Standard (PRF 484)
*Lag Time (MIN) 6

Elevation (FT)	Storage (ACRE-FT)	Discharge (CFS)
722.60	0.000	0.000
724.00	0.010	2.057
725.00	0.900	2.883
726.00	2.380	3.520
727.00	3.960	4.059
728.00	5.670	4.533
729.20	7.770	5.045

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT:	**PALATINE CORPORATE CENTER**	**PROJECT #:**	11061
LOCATION:	**PALATINE, IL**	**DATE:**	January-21
		LAST REVISED:	

CALCULATION TITLE:	**HEC-HMS RESULTS DETENTION PROPOSED PEAK**
DESCRIPTION:	PROPOSED OCS-1
STORM EVENT	100 YEAR
DURATTION	18HR

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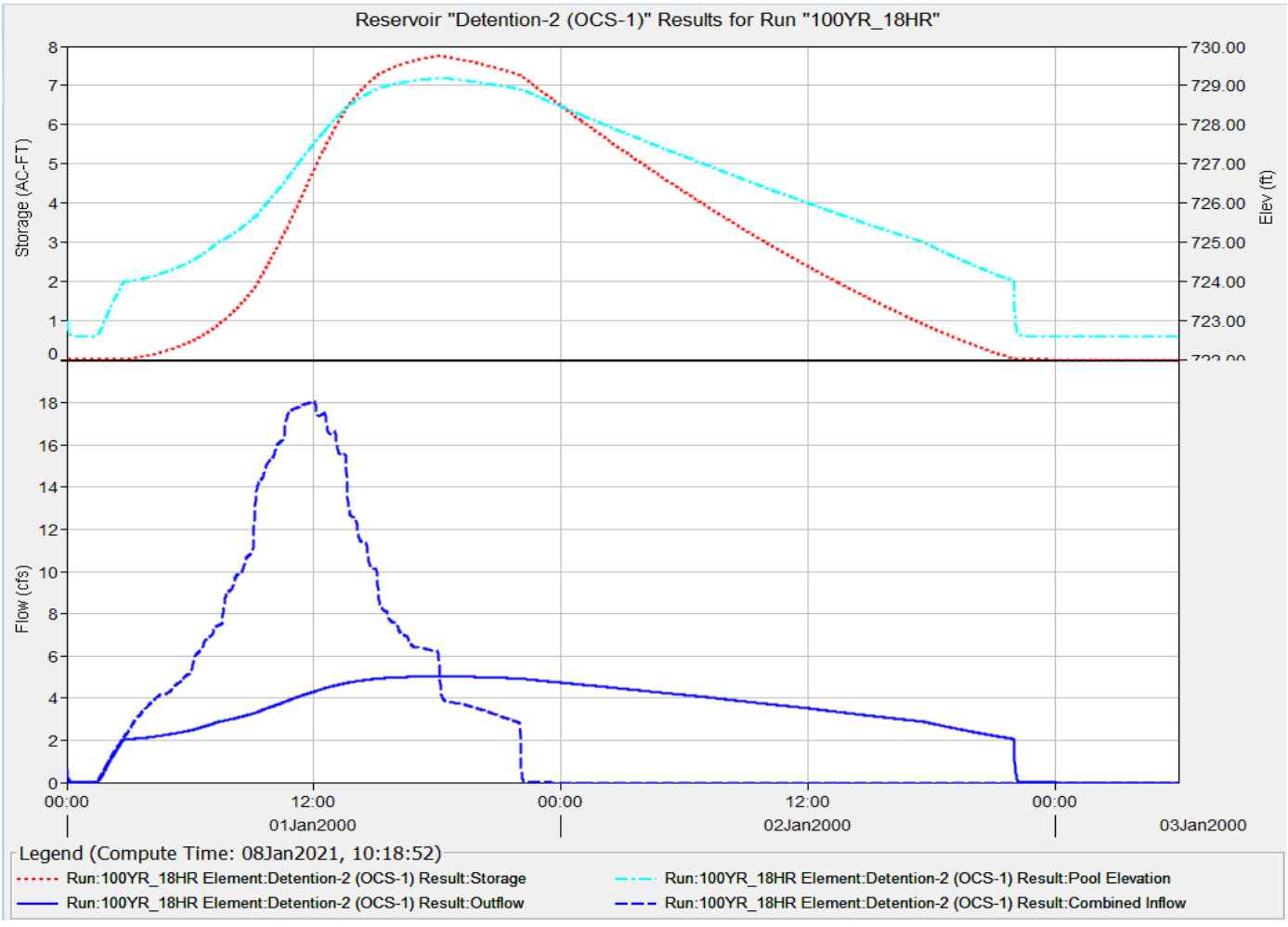


Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

TAB 6

STORMWATER MANAGEMENT PERMIT APPLICATION
FOR
PALATINE CORPORATE CENTER
PALATINE, COOK COUNTY, IL

PREPARED FOR
PANATTONI DEVELOPMENT COMPANY

PREPARED BY
SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018

SPACECO PROJECT # 11061

JANUARY 2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Schedule and Description of Maintenance for the Sediment and Erosion Control Plan

Construction will commence with the installation of silt fence that will act as a filter between the site construction and the adjacent properties, followed by installation of additional erosion control measures to be designed as part of the construction documents. Erosion control measures will remain in place and will be maintained until the site has been stabilized at which time they will be removed.

The erosion control measures shall be installed prior to initial land disturbance activities or as soon as practical. Specific measures will be included in the construction documents.

Except when prevented by inclement weather conditions, all disturbed areas to remain inactive for more than 14 days will be stabilized by seeding, sodding, mulching, covering, or equivalent erosion control measures, within seven days.

Permanent soil stabilization shall be provided for all disturbed areas within seven days after final grade is established.

All temporary erosion and sediment control practices shall be removed and disposed of within thirty days after final site stabilization is achieved or after the temporary practices are no longer necessary. Trapped sediment shall be permanently stabilized to prevent further erosion.

See Schedule P for detailed information on Erosion Control.

TAB 7

STORMWATER MANAGEMENT PERMIT APPLICATION
FOR
PALATINE CORPORATE CENTER
PALATINE, COOK COUNTY, IL

PREPARED FOR
PANATTONI DEVELOPMENT COMPANY

PREPARED BY
SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018

SPACECO PROJECT # 11061

JANUARY 2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

There is no regulatory floodplain shown on the project site, per the FIRM map on Exhibit 5.

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite700, Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

January 11, 2021

Mr. Dan Feltes
Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street
Chicago, IL 60611

RE: PALATINE CORPORATE CENTER
PALATINE, ILLINOIS
SPACECO PROJECT NO. 11061

Dear Mr. Feltes:

The FEMA Flood Insurance Rate Maps, Numbers 17031C0181J last revised August 19, 2008, show no presence of a floodplain on the project site located at 200 East Daniels Road , in Palatine, IL.

Sincerely,

SPACECO, Inc.

Daniel C. Stevens, P.E.
Executive Vice President

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

TAB 8

STORMWATER MANAGEMENT PERMIT APPLICATION
FOR
PALATINE CORPORATE CENTER
PALATINE, COOK COUNTY, IL

PREPARED FOR
PANATTONI DEVELOPMENT COMPANY

PREPARED BY
SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018

SPACECO PROJECT # 11061

JANUARY 2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

A wetland assessment was conducted by others and is not part of our scope.

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

TAB 9

STORMWATER MANAGEMENT PERMIT APPLICATION
FOR
PALATINE CORPORATE CENTER
PALATINE, COOK COUNTY, IL

PREPARED FOR
PANATTONI DEVELOPMENT COMPANY

PREPARED BY
SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018

SPACECO PROJECT # 11061

JANUARY 2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

There are no riparian environments located on the project site. Riparian requirements are not applicable.

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

TAB 10

STORMWATER MANAGEMENT PERMIT APPLICATION
FOR
PALATINE CORPORATE CENTER
PALATINE, COOK COUNTY, IL

PREPARED FOR
PANATTONI DEVELOPMENT COMPANY

PREPARED BY
SPACECO, INC.
9575 W. HIGGINS ROAD, SUITE 700
ROSEMONT, IL 60018

SPACECO PROJECT # 11061

JANUARY 2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Maintenance & Monitoring Requirements

Temporary Soil Erosion & Sediment Control

1. **Soil Erosion and Sediment Control**
   The contractor will maintain all erosion control measures for the duration of the construction activity. Erosion control measures for the proposed development are included in the plan set. At the completion of construction, the contractor will coordinate the transfer of maintenance responsibilities. Maintenance activities will be performed in accordance with the Illinois Environmental Protection Agency Standards and Specifications for Soil Erosion and Sediment control, 1987.

   Except as prevented by inclement weather conditions, all disturbed areas to remain active for more than 14 days will be stabilized by seeding, sodding, mulching, covering, or by other equivalent erosion control measures within seven days. Permanent soil stabilization shall be provided within seven days after final grading is completed.

   All temporary erosion and sediment control practices will be removed and disposed of within thirty days after final stabilization is achieved or after the temporary practices are no longer needed.

Permanent

1. **General**
   Regular inspections and routine maintenance of general areas shall be performed on a monthly or as-needed basis. Specific items of concern include:
   _____ Litter and debris shall be controlled
   _____ Landscaped areas shall be maintained with regular mowing and restored with appropriate seeding/vegetation as necessary
   _____ Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations
   _____ Riprap areas shall be repaired with the addition of new riprap, as necessary, of similar size and shape
   _____ Roads shall be swept, vacuumed and/or washed on a regular basis

2. **Stormwater Management Facilities**
   All component of the stormwater management facilities shall be checked monthly between March and November and maintained as necessary to ensure proper performance. It is critical that all inflows and outflow to the detention facility are clean and performing as designed. In addition, the design volume of the detention facility shall also be maintained. Inspections for the following specific items should be conducted monthly between March and November:

   Side Slopes/Embankment/Emergency Overflow Structure
   _____ Inspect embankment for settlement and erosion
   _____ Remove woody growth from the embankment
   _____ Any breaks, hire Registered Professional Engineer for design resolution
   _____ Seed and sod any eroded areas
   _____ Signs of piping (leakage), repair
   _____ Signs of seepage or wet spots on the downstream dace of a berm, may required toe drains or chimney drains to solve problems
   _____ Stabilize emergency overflow structure if erosion observed
   _____ Remove obstruction blocking emergency overflow spillway

   Vegetated Areas

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

_____ Regula mowing to control vegetation, no cutting of native vegetation
_____ Need for planting, reseeding or sodding. Supplement alternative native vegetation if a significant potion has bot established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
_____ Evidence of grazing, motorbikes or other vehicles, repair
_____ Check for invasive vegetation, remove where possible
_____ All vegetation must be maintained per the approved planting plan

Outlet Control Structure
_____ Inspect restrictor and remove debris if clogged or discharge reduced
_____ Remove accumulated sediment at outlet
_____ Scour and erosion at outlet, repair and reseed
_____ Any ice damage to outlet of pipe, repair if necessary
_____ Condition of trash tracks, remove debris
_____ Outlet channel conditions downstream

Access for Maintenance Equipment
_____ Remove any obstructions placed in maintenance easements

Safety Features
_____ Access controls to hazardous areas
_____ Fences
_____ Loose or damaged posts
_____ Loose or broken wires
_____ Accumulated debris in fences
_____ Conditions of gates
_____ Signs

Detention Volume
_____ Inspect all stormwater detention facilities to ensure that the constructed volume for detention is maintained. No sediment, topsoil or other dumping into the facility shall be allowed. Specific locations in the stormwater management system, designed to accumulate sediment, shall be dredged as necessary to prevent sediment from reaching the invert off any gravity outlet pipe.

3. <u>Volume Control Facility</u>

Routine inspections and maintenance of volume control facilities shall be performed by the Owner on a yearly or as-needed basis. Specific items of concern include:

_____ Facility shall be inspected yearly using the monitoring well to verify the system is functioning properly
_____ Surface of permeable pavement shall be cleaned with a low-pressure power washer
_____ Accumulated sediment from surface shall be vacuumed out and disposed of properly
_____ Appropriate signage shall be repaired if damaged or illegible

4. <u>Stormwater Collection System</u>

The Owner shall perform monthly inspections of all components of the stormwater collection system. The monthly inspections shall occur between March and November and include the following specific areas of concern:

Storm Inlets/Manholes
_____ Remove accumulated leaved and other debris from grates
_____ Reset covers/lids on as-needed basis
_____ Remove accumulated sediment from bottom of manhole when 50% of sump is filled

Storm Sewers/Culverts

Attachment: Final Stormwater Report (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

_____ Visually inspect pipes by removing manhole lids, make repairs as necessary
_____ Storm sewers and culvers shall be checked for siltation deposits at inlets, outlets, and within the conduit, clean out as necessary
_____ Restore riprap at outfalls if erosion observed
_____ Restore riprap at outfalls
_____ Replant and reseed any eroded areas

Overland Flow Routes (Ditches/Swales)
_____ Annual visual inspections shall be performed that verify the design capacity of the overland flow routes is maintained. The slope and cross-sectional area of the ditch/swale shall be verified during this inspection
_____ Remove any obstruction that have been placed in the drainage path
_____ Seed and sod any eroded areas
_____ Restore riprap as necessary
_____ Regrade to provide positive drainage as necessary (A Professional Land Surveyor may be required to check grades to ensure positive drainage)
_____ Regular mowing to control vegetation
_____ Rototill bottom of dry swales if not drawing down within 48-hours

5. <u>Vegetated Areas</u>
_____ Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area after second growing season). Reseed with alternative native grass species if original grass cover has not successfully established
_____ Evidence of grazing, motorbiked, or other vehicles, repair
_____ Check for invasive vegetation, remove when possible
_____ Regular mowing to control vegetation it is recommended that native vegetation remain uncut
_____ Dead or damaged non-native grassy areas _ repair with seeding with fertilization or seeding with mulch
_____ Compensatory storage area shall be reseeded with appropriate vegetation according to the approved planting plan

6. <u>Qualified Sewer Construction</u>
_____ Perform manhole inspections once every five years, make repairs as necessary
_____ Perform sewer inspection once every five years, make repairs as necessary
_____ Perform regular sewer cleaning so that every sewer segment is cleaned once every five years
_____ Remove any construction places in maintenance easements that may impede maintenance equipment access.

Existing Stormwater system design:

Existing Conditions:

- Storm culvert under railroad conveys stormwater from north of railroad tracks through the site. Currently the Weber-Stephens end section is not in good shape. The end section that leads into the existing on-site detention is very overgrown and does not allow for the proper conveyance of stormwater from the north. Please see the attached photos of the existing conditions.
- A small detention area at the northwest corner of the Weber-Stephens site holds stormwater for a period of time. This detention area grossly underperforms compared to todays standards and codes. The area is very overgrown, does not hold much capacity of water and does not effectively move the water out of the system. Essentially this detention area in its existing condition is likely contributing to issues on the north side of the railroad tracks as water is unable to properly flow through the existing culvert and therefore likely backing up stormwater to the north. Please see the attached photos of the existing conditions.
- A drainage ditch and storm piping exists along the west and south of the site to convey stormwater to an existing storm connection at the south end of the site. The ditch is very inadequate to handle the existing stormwater volumes and is in poor condition. Per the included photos it can be seen that water sits in the ditch versus being conveyed through the system. This problem further contributes to the problems in the area with water having problems getting through the system. Due to the existing conditions stormwater is likely backing up to the north of the railroad tracks and then further spilling off site, likely onto Oak Street, since the water has difficulty moving through the system. Please see the attached photos.

Benefits of new stormwater design:

- Issues with railroad culvert onto the site will be corrected (end of culvert to be repaired, section leading into pond will be re-done). These corrections should allow the water to better flow from the north through the culvert.
- Site detention system designed to handle significantly more stormwater than design standards from 50+ years ago. Per Spaceco preliminary designs this equates to approximately 10 times more stormwater storage capacity. Todays stormwater designs are to handle a 100 year event with approximately 8.57 inches of rain over a 24 hour period. The northwest detention area (Dention Basin A)will be significantly deeper than what exists today to allow for better stormwater handling and storage. The e
- New design sends stormwater to the east and away from Oak Street residential area. This design likely corrects the issues experienced along Oak Street.

Attachment: Existing Storm Sewer design (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Exhibit A – Existing Stormwater Photos (taken 12/9/20)

Existing Weber-Stephens side of railroad culvert.

Attachment: Existing Storm Sewer design (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Existing storm pipe inlet into detention area.

Attachment: Existing Storm Sewer design (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Existing storm detention area. Very overgrown causing water conveyance issues.

Attachment: Existing Storm Sewer design (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Western portion of storm ditch. In very disrepair and water sits versus being conveyed.

FINAL PLAT OF
PALATINE INDUSTRIAL SUBDIVISION

BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN.

NEW LOTS AND EASEMENT GRANT INFORMATION

P.I.N.:
02-23-114-010-0000
02-23-114-021-0000
02-23-114-022-0000
02-23-114-034-0000
02-23-114-035-0000
02-23-114-036-0000
02-23-114-037-0000
02-23-114-038-0000
02-23-114-039-0000

N

SCALE 1" = 50'
0 50 100

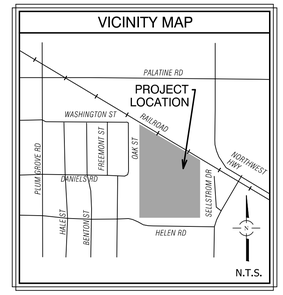
BASIS OF BEARINGS:
TRUE NORTH BASED ON GEODETIC OBSERVATION IL EAST ZONE

NOTE: ALL BEARINGS AND DISTANCES ARE MEASURED UNLESS OTHERWISE NOTED

IR = IRON ROD
IP = IRON PIPE
(M) = MEASURED
(R) = RECORD
= SUBDIVISION LIMITS

= DRAINAGE EASEMENT HEREBY GRANTED
= SANITARY EASEMENT HEREBY GRANTED
= WATERMAIN EASEMENT HEREBY GRANTED
= ACCESS EASEMENT HEREBY GRANTED

VICINITY MAP



AREA TABLE		
	SQ. FT.	ACRES
LOT 1	477,235	10.956
LOT 2	628,605	14.431
VACATED OLD HICKS ROAD	34,358	0.789
TOTAL	1,140,198	26.176

WASHINGTON STREET
HERETOFORE DEDICATED

OAK STREET
HERETOFORE DEDICATED

DANIELS ROAD
HERETOFORE DEDICATED

OLD HICKS ROAD
(ALSO KNOWN AS S. SELLSTROM DRIVE)
HEREBY VACATED

CHICAGO AND NORTH WESTERN RAILWAY

WASHINGTON HIGHLANDS ADDITION TO PALATINE RECORDED JUNE 18, 1925 AS DOCUMENT 8949307

DANIELS ROAD SUBDIVISION RECORDED NOVEMBER 8, 1926 AS DOCUMENT 9459391

HELEN ROAD SUBDIVISION RECORDED JULY 8, 1981 AS DOCUMENT 25930606

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9 LOT 10 LOT 11 LOT 12 LOT 13 LOT 14 LOT 15 LOT 16

LOT 1

LOT 2

UNSUBDIVIDED LAND

UNSUBDIVIDED LAND

DRAINAGE EASEMENT HEREBY GRANTED

WATERMAIN EASEMENT HEREBY GRANTED

PERPETUAL EASEMENT HEREBY GRANTED

ACCESS EASEMENT HEREBY GRANTED

SANITARY EASEMENT HEREBY GRANTED

PUBLIC UTILITY AND DRAINAGE EASEMENT HEREBY GRANTED (OVER ENTIRE PORTION OF VACATED OLD HICKS ROAD)

PUBLIC UTLITY EASEMENT HEREBY GRANTED

CONC MONUMENT TO BE SET AT CORNER

SEE DETAIL (NOT TO SCALE)

689.80'(M)
S59°21'37"E(M)
890.31'(M)
890.00'(R)

N30°38'23"E(M)
15.00'(M&R)

200.51'(M)

580.81'(M)
S59°21'37"E(M)
662.04'(M&R)

1,238.92'(R)
N00°06'43"W(M)
1,238.38'(M)

S00°08'53"W(M)
888.44'(M)

412.29'(M)
S00°08'53"W(M)

505.00'(M&R)
N00°08'53"E(M)

81.23'(M)

S18°36'11"E(M)
54.40'(M)

588.78'(M)

1,357.14'(M)
N89°50'39"W(M)

680.88'(M)

87.49'(M)

FOR REVIEW PURPOSES ONLY

PREPARED FOR:
MIDWEST INDUSTRIAL FUNDS
1301 W. 22ND STREET, SUITE 711
OAK BROOK, IL 60523

REVISIONS:
01/22/2021
03/11/2021

SPACECO INC.
CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 01/18/2021
JOB NO: 11061
FILENAME: 11061SUB-01
SHEET 1 OF 3

N:\Projects\11061\SURVEY\11061SUB-01.dgn Default User=blounsbury

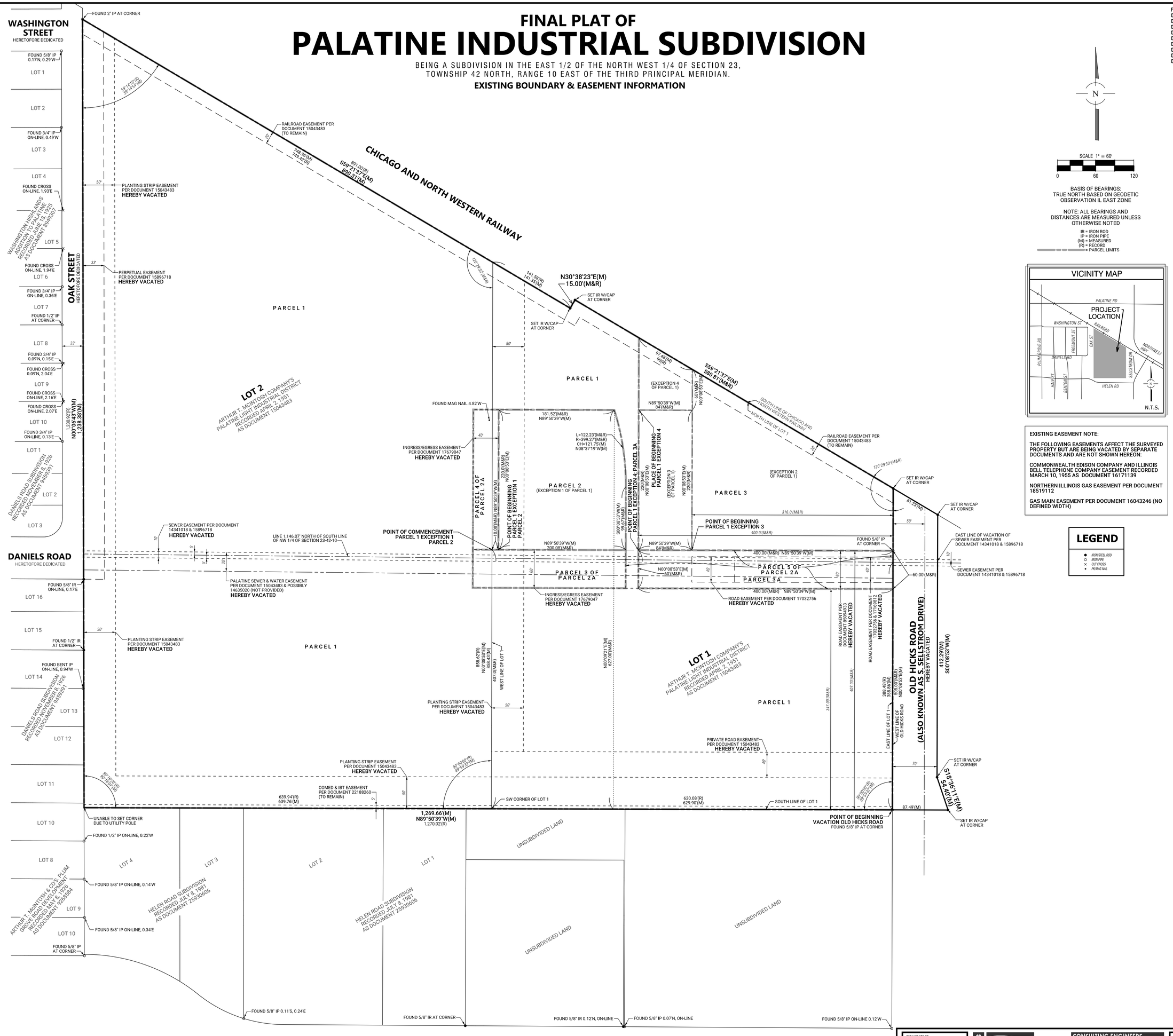
Attachment: Final Plat of Subdivision (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

FINAL PLAT OF
PALATINE INDUSTRIAL SUBDIVISION

BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23,
TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN.

EXISTING BOUNDARY & EASEMENT INFORMATION

P.I.N.:
02-23-114-010-0000
02-23-114-021-0000
02-23-114-022-0000
02-23-114-034-0000
02-23-114-035-0000
02-23-114-036-0000
02-23-114-037-0000
02-23-114-038-0000
02-23-114-039-0000



PREPARED FOR:
MIDWEST INDUSTRIAL FUNDS
1301 W. 22ND STREET, SUITE 711
OAK BROOK, IL 60523

FOR REVIEW PURPOSES ONLY

REVISIONS:
01/22/2021

SPACECO INC.

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 01/18/2021
JOB NO: 11061
FILENAME: 11061SUB-01
SHEET 2 OF 3

N:\Projects\11061\SURVEY\11061SUB-01.dgn SHEET 2 User=blounsbury

Attachment: Final Plat of Subdivision (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PRELIMINARY PLAT OF
PALATINE INDUSTRIAL SUBDIVISION

BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23,
TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN.

P.I.N.:
02-23-114-010-0000
02-23-114-021-0000
02-23-114-022-0000
02-23-114-034-0000
02-23-114-035-0000
02-23-114-036-0000
02-23-114-037-0000
02-23-114-038-0000
02-23-114-039-0000

NOTES AND CERTIFICATES

OWNER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF _____)

THIS IS TO CERTIFY THAT _____ IS THE OWNER OF THE PROPERTY DESCRIBED HEREON AND THAT IT HAS CAUSED THE SAID PROPERTY TO BE PLATTED AS SHOWN HEREON FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE TITLE THEREON INDICATED.

THIS IS TO ALSO CERTIFY THAT AS OWNER(S) OF THE PROPERTY AS LEGALLY DESCRIBED ON THIS PLAT, HAVE DETERMINED TO THE BEST OF OUR KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIE.

SCHOOL DISTRICTS

COMMUNITY CONSOLIDATED SCHOOL DISTRICT NO. 15
TOWNSHIP HIGH SCHOOL DISTRICT 211
HARPER COMMUNITY COLLEGE DISTRICT NO. 512

DATED THIS _____ DAY OF _____ A.D. 20_____

SIGNED:_____

_____
PRINTED NAME AND TITLE

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF _____)

I,_____ A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT

_____, TITLE _____ AND

_____, TITLE _____

OF _____ WHO IS/ARE PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE/THEY DID SIGN AND DELIVER THIS INSTRUMENT AS A FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES HEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL

THIS _____ DAY OF _____, A.D. 20_____

_____
NOTARY PUBLIC

SURFACE WATER DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF_____)

WE HEREBY CERTIFY TO THE BEST OF OUR KNOWLEDGE AND BELIEF THAT ADEQUATE PROVISIONS HAVE BEEN MADE FOR THE DIVERSION AND DETENTION OF SURFACE WATERS INTO PUBLIC AREAS OR DRAINS WITHIN THE RIGHTS OF THE SUBDIVIDER AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON ADJACENT LAND OWNERS/PROPERTY IN SUCH CONCENTRATION AS MAY CAUSE DAMAGE BY EROSION OR SEDIMENTATION TO SUCH PROPERTY BECAUSE OF CONSTRUCTION OF THE SUBDIVISION.

DATED THIS _____ DAY OF _____, A.D. 20 _____ .

_____
BY: OWNER

_____
BY: ILLINOIS PROFESSIONAL ENGINEER

OWNER'S CERTIFICATE - VACATED OLD HICKS ROAD

STATE OF ILLINOIS)
) SS
COUNTY OF _____)

THIS IS TO CERTIFY THAT _____ IS THE OWNER OF THE PROPERTY DESCRIBED HEREON AND THAT IT HAS CAUSED THE SAID PROPERTY TO BE PLATTED AS SHOWN HEREON FOR THE USES AND PURPOSES THEREIN SET FORTH, AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE TITLE THEREON INDICATED.

THIS IS TO ALSO CERTIFY THAT AS OWNER(S) OF THE PROPERTY AS LEGALLY DESCRIBED ON THIS PLAT, HAVE DETERMINED TO THE BEST OF OUR KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIE.

SCHOOL DISTRICTS

COMMUNITY CONSOLIDATED SCHOOL DISTRICT NO. 15
TOWNSHIP HIGH SCHOOL DISTRICT 211
HARPER COMMUNITY COLLEGE DISTRICT NO. 512

DATED THIS _____ DAY OF _____ A.D. 20_____

SIGNED:_____

_____
PRINTED NAME AND TITLE

NOTARY PUBLIC CERTIFICATE - VACATED OLD HICKS ROAD

STATE OF ILLINOIS)
) SS
COUNTY OF _____)

I,_____ A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT

_____, TITLE _____ AND

_____, TITLE _____

OF _____ WHO IS/ARE PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE/THEY DID SIGN AND DELIVER THIS INSTRUMENT AS A FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES HEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTARIAL SEAL

THIS _____ DAY OF _____ A.D. 20_____

_____
NOTARY PUBLIC

PLAN COMMISSION

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE PLAN COMMISSION OF THE VILLAGE OF PALATINE, COOK COUNTY, ILLINOIS

DATED THIS _____ DAY OF _____, A.D. 20_____.

SIGNED:_____
CHAIRMAN

ATTEST:_____
SECRETARY

VILLAGE COUNCIL

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

APPROVED BY THE VILLAGE COUNCIL OF THE VILLAGE OF PALATINE, COOK COUNTY, ILLINOIS

DATED THIS __ DAY OF ___, A.D. 20___.

SIGNED:_____
MAYOR

ATTEST:_____
VILLAGE CLERK

VILLAGE ENGINEER

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS PLAT HAS BEEN CHECKED FOR CONFORMANCE TO THE VILLAGE OF PALATINE STANDARDS AND REQUIREMENTS, AND WORKING DRAWINGS AND SPECIFICATIONS FOR IMPROVEMENTS HAVE BEEN PREPARED IN CONFORMANCE WITH THE VILLAGE STANDARDS AND REQUIREMENTS, AND ENGINEERING FEES DUE TO THE VILLAGE OF PALATINE HAVE BEEN PAID.

DATED THIS _____ DAY OF _____ A.D. 20_____.

SIGNED:_____
VILLAGE ENGINEER

VILLAGE COLLECTOR

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

I DO HEREBY CERTIFY THAT THERE ARE NO DEFERRED SPECIAL ASSESSMENTS OR UNPAID CURRENT ASSESSMENTS DUE AGAINST THE LAND INCLUDED IN THE ABOVE PLAT.

DATED THIS _____ DAY OF _____ A.D. 20_____

SIGNED:_____
VILLAGE COLLECTOR

ABROGATION CERTIFICATE

THE UNDERSIGNED AUTHORIZED REPRESENTATIVE OF THE VILLAGE OF PALATINE HEREBY RELEASE AND ABROGATE ALL EASEMENT RIGHTS WITHIN THOSE PORTIONS OF HEREBY VACATED OLD HICKS ROAD AND EASEMENTS AS DEFINED ON SHEET 2 OF THIS PLAT.

BY:_____ NAME: _____
(SIGNATURE) (PLEASE PRINT)

TITLE:_____ DATE: _____

VILLAGE OF PALATINE EASEMENT:

WHENEVER THE WORDS "PUBLIC UTILITIES" OR "PUBLIC UTILITIES EASEMENT" SHALL APPEAR ON THIS PLAT THE VILLAGE OF PALATINE, A MUNICIPAL CORPORATION, COOK COUNTY, ILLINOIS, AND ITS SUCCESSORS OR ASSIGNS JOINTLY AND SEVERALLY SHALL HOLD A PERPETUAL EASEMENT UNDER, OVER AND ACROSS THE SURFACE OF THE PROPERTY SHOWN WITHIN THE LINES OF THE PLAT MARKED AS SUCH FOR THE INSTALLATION, CONSTRUCTION, USE, REPAIR AND MAINTENANCE OF ALL PUBLIC UTILITY EQUIPMENT, INCLUDING BUT NOT LIMITED TO, FACILITIES USED IN CONNECTION WITH THE TRANSMISSION AND DISTRIBUTION OF ELECTRICITY AND SOUNDS AND SIGNALS, WATER AND SEWAGE MAIN AND PIPING, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES AND ROOTS, AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTION SHALL NOT BE PLACED OVER GRANTEES FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN THE LINES MARKED "EASEMENT" WITHOUT THE PRIOR WRITTEN CONSENT OR THE GRANTEES. PROVIDED, HOWEVER, THAT SUCH CONSENT OF THE GRANTEE SHALL NOT RELIEVE THE GRANTORS, THEIR SUCCESSORS OR ASSIGNS FROM THE DUTY AND OBLIGATION TO REMOVE ANY SUCH OBSTRUCTIONS AT THEIR SOLE EXPENSE UPON THE DIRECTION OF THE GRANTEE, WHENEVER THE GRANTEE DEEMS SUCH REMOVAL NECESSARY IN ITS SOLE JUDGEMENT TO ENABLE THE GRANTEE TO REPAIR OR MAINTAIN ANY FACILITIES WITHIN THE EASEMENT OR OTHERWISE ALLOW THE GRANTEE FULL USE AND ENJOYMENT OF THE EASEMENT RIGHTS GRANTED HEREUNDER, AFTER INSTALLATION OF ANY SUCH FACILITIES. THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO UNREASONABLY INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

ELECTRIC AND TELEPHONE:

A PERMANENT, NONEXCLUSIVE EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC AND COMMUNICATION SERVICE IS HEREBY RESERVED FOR AND GRANTED TO ANY ELECTRIC, TELEPHONE, AND/OR COMMUNICATION COMPANY OR COMPANIES AUTHORIZED BY THE VILLAGE OF PALATINE, ILLINOIS (HEREINAFTER "GRANTEE") JOINTLY AND SEVERALLY, TO INSTALL, OPERATE, MAINTAIN, AND REMOVE, FROM TIME TO TIME, FACILITIES USED IN CONNECTION WITH UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY AND SOUNDS AND SIGNALS IN, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN AS AND/OR LABELED AS "UTILITY EASEMENT", "UTILITY AND DRAINAGE EASEMENT", OR "UTILITY AND LANDSCAPING EASEMENT", WITHIN DASHED LINES ON THE ATTACHED PLAT OF SUBDIVISION AND PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS UNDER THE SURFACE OF EACH LOT TO SERVE IMPROVEMENTS THEREON, THE RIGHT TO CUT, TRIM, OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEE'S FACILITIES OR IN, UPON OR OVER SUCH EASEMENTS WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES, SUCH FACILITIES SHALL GENERALLY BY LOCATED UNDERGROUND AND AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF. THE LOCATION OF FACILITIES BY GRANTEES SHALL NOT CONFLICT OR INTERFERE WITH PUBLIC IMPROVEMENTS AND ANY CONFLICTS IN USE SHALL BE SUBJECT TO RESOLUTION AND APPROVAL OF THE GRANTEES.

GAS:

A PERMANENT, NONEXCLUSIVE EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH GAS IS HEREBY RESERVED FOR AND GRANTED TO ANY NATURAL GAS COMPANY AUTHORIZED BY THE VILLAGE OF PALATINE, ILLINOIS, IN ALL PLATTED "EASEMENT" AREAS, STREET, ALLEYS AND OTHER PUBLIC WAYS AND PLACES SHOWN ON THE PLAT, SUCH EASEMENT TO BE FOR THE INSTALLATION, MAINTENANCE, RELOCATION, RENEWAL AND REMOVAL OF GAS MAINS AND APPURTENANCES FOR THE PURPOSE OF SERVING ALL AREAS SHOWN ON THE PLAT AS WELL AS OTHER PROPERTY, WHETHER OR NOT CONTIGUOUS THERETO. NO BUILDINGS OR OTHER STRUCTURES SHALL BE CONSTRUCTED OR ERECTED IN ANY SUCH "EASEMENT" AREAS, STREET, ALLEYS OR PUBLIC WAYS OR PLACES. ALL SUCH GAS MAINS AND APPURTENANCES SHALL BE GENERALLY LOCATED UNDERGROUND AND USE OF SAID EASEMENTS SHALL NOT CONFLICT OR INTERFERE WITH ANY PUBLIC IMPROVEMENTS AND ANY CONFLICTS IN USE SHALL BE SUBJECT TO RESOLUTION AND APPROVAL BY THE VILLAGE.

CABLE TELEVISION:

A PERMANENT, NONEXCLUSIVE EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF PALATINE, ILLINOIS AND/OR TO ANY CABLE TELEVISION COMPANY OR COMPANIES AUTHORIZED BY THE VILLAGE TO INSTALL CABLE TELEVISION FACILITIES WITHIN THE SUBDIVISION (THE "COMPANY") AND THEIR SUCCESSORS AND ASSIGNS IN, UNDER, ACROSS, ALONG, THROUGH AND UPON THE SURFACE OF THE PROPERTY KNOWN AS AND/OR LABELED AS "UTILITY EASEMENT", WITHIN DASHED LINES ON THE ATTACHED PLAT OF SUBDIVISION FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, OPERATING, INSPECTING, MAINTAINING, REMOVING, REPLACING, RENEWING, ALTERING, AND ENLARGING TELEVISION LINES OR APPURTENANCES FROM TIME TO TIME, AND WITHOUT LIMITATION, SUCH OTHER INSTALLATIONS AS MAY BE REQUIRED TO FURNISH CABLE TELEVISION SERVICE TO THE ATTACHED AREA AND SUCH APPURTENANCES THERETO AS THE VILLAGE AND THE COMPANY MAY DEEM NECESSARY, TOGETHER WITH THE RIGHT OF ACCESS ACROSS THE EASEMENTS INCLUDED IN THE PLAT OF SUBDIVISION FOR GRANTED TO THE VILLAGE AND THE COMPANY TO CUT DOWN, TRIM OR REMOVE ANY TREES, SHRUBS OR OTHER PLANTS THAT INTERFERE WITH THE OPERATION OF OR ACCESS TO SUCH LINES IN, ON, UPON, ACROSS, UNDER OR THROUGH SUCH EASEMENTS. NO PERMANENT BUILDINGS OR TREES SHALL BE PLACED ON SUCH EASEMENTS, BUT SAME MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH AFORESAID USES AND RIGHTS, SUCH FACILITIES SHALL BE GENERALLY LOCATED UNDERGROUND AND USE OF SAID EASEMENTS SHALL NOT CONFLICT OR INTERFERE WITH ANY PUBLIC IMPROVEMENTS AND ANY CONFLICTS IN USE SHALL BE SUBJECT TO RESOLUTION AND APPROVAL BY THE VILLAGE.

DRAINAGE EASEMENT PROVISION:
A PERMANENT, NON-EXCLUSIVE EASEMENT FOR DRAINAGE SERVING THE SUBDIVISION OWNER/OWNERS OF LOT 1 AND LOT 2 (HEREINAFTER "GRANTOR") IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF PALATINE, ILLINOIS.

THE GRANTING OF THE FOREGOING EASEMENT CONFERS NO OBLIGATION ON THE VILLAGE OF PALATINE (HEREINAFTER "GRANTEE") TO MAINTAIN, REPAIR, REPLACE, RELOCATE, OR REMOVE ANY OF THE FOREGOING.

THE EASEMENT PROVISIONS ALLOW THE GRANTOR OR THE GRANTEE ACCESS TO INSTALL, OPERATE, MAINTAIN, RELOCATE AND REMOVE, FROM TIME TO TIME, PIPES AND OTHER DRAINAGE SEWER FACILITIES USED IN CONNECTION WITH DRAINAGE, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF:

(I) THE PROPERTY SHOWN AS AND/OR LABELED AS "DRAINAGE EASEMENT," WITHIN DASHED LINES ON THE ATTACHED PLAT OF SUBDIVISION AND

(II) PROPERTY DESIGNATED ON THE PLAT AS PUBLICLY DEDICATED STREETS AND ALLEYS (THE PROPERTY DESCRIBED IN (I) AND (II) HEREINAFTER THE "EASEMENT AREAS"), TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS UNDER THE SURFACE OF SUCH EASEMENT AREAS TO SERVE IMPROVEMENTS ON THE SUBDIVISION LOTS, THE RIGHT TO CUT, TRIM, OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON SUCH EASEMENT AREAS FOR ALL SUCH PURPOSES.

GRANTEE MAY MAINTAIN, REPAIR AND REPLACE THE FACILITIES LOCATED IN THE EASEMENT AREAS. GRANTEE SHALL PROMPTLY BACKFILL ANY TRENCH MADE BY IT AND REPAIR ANY DAMAGE CAUSED BY IT INCLUDING, WITHOUT LIMITATION, DAMAGES FROM EXCAVATION OR USE OF THE EASEMENT AREAS, AND INCLUDING (WITHOUT LIMITATION) THE REPAIR AND REPLACEMENT OF PAVEMENT, SIDEWALKS, CURBING, FENCES AND LANDSCAPING, THEREBY RESTORING ANY SUCH AREA SUBSTANTIALLY TO ITS PRIOR CONDITION.

GRANTOR RESERVES (AND GRANTEE ACKNOWLEDGES AND AGREES TO SUCH RESERVATION) THE RIGHT TO USE THE EASEMENT AREAS FOR PURPOSES WHICH WILL NOT INTERFERE WITH GRANTEE'S ENJOYMENT OF ITS RIGHTS HEREBY GRANTED; SPECIFICALLY, GRANTOR SHALL HAVE THE RIGHT TO CONSTRUCT AND/OR INSTALL PAVEMENT FOR PARKING AND DRIVE AREAS, CURBING, SIDEWALKS, LANDSCAPING, FENCING AND SUCH OTHER SIMILAR FEATURES, BUT IN NO EVENT SHALL GRANTOR CONSTRUCT OR EFFECT ANY BUILDING OR OTHER STRUCTURE. SUCH FACILITIES SHALL BE LOCATED UNDERGROUND (EXCEPT FOR FACILITIES REQUIRED TO BE ABOVE GROUND, WHICH WILL BE LOCATED IN LANDSCAPED PORTIONS OF THE EASEMENT AREAS ONLY). AFTER INSTALLATION OF ANY UTILITY FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF. THE LOCATION OF FACILITIES BY GRANTEES SHALL NOT CONFLICT OR INTERFERE WITH PUBLIC IMPROVEMENTS AND ANY CONFLICTS IN USE SHALL BE SUBJECT TO RESOLUTION AND APPROVAL OF THE GRANTEES.

SANITARY SEWER EASEMENT PROVISION:
A PERMANENT, NON-EXCLUSIVE EASEMENT FOR SANITARY SERVING THE SUBDIVISION OWNER/OWNERS OF LOT 1 AND LOT 2 HEREINAFTER "GRANTOR") IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF PALATINE, ILLINOIS.

THE GRANTING OF THE FOREGOING EASEMENT CONFERS NO OBLIGATION ON THE VILLAGE OF PALATINE (HEREINAFTER "GRANTEE") TO MAINTAIN, REPAIR, REPLACE, RELOCATE, OR REMOVE ANY OF THE FOREGOING.

THE EASEMENT PROVISIONS ALLOW THE GRANTOR OR THE GRANTEE ACCESS TO INSTALL, OPERATE, MAINTAIN, RELOCATE AND REMOVE, FROM TIME TO TIME, PIPES AND OTHER SANITARY SEWER FACILITIES USED IN CONNECTION WITH UNDERGROUND SANITARY SEWER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF:

(I) THE PROPERTY SHOWN AS AND/OR LABELED AS "SANITARY SEWER EASEMENT," WITHIN DASHED LINES ON THE ATTACHED PLAT OF SUBDIVISION AND

(II) PROPERTY DESIGNATED ON THE PLAT AS PUBLICLY DEDICATED STREETS AND ALLEYS (THE PROPERTY DESCRIBED IN (I) AND (II) HEREINAFTER THE "EASEMENT AREAS"), TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS UNDER THE SURFACE OF SUCH EASEMENT AREAS TO SERVE IMPROVEMENTS ON THE SUBDIVISION LOTS, THE RIGHT TO CUT, TRIM, OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON SUCH EASEMENT AREAS FOR ALL SUCH PURPOSES.

GRANTEE MAY MAINTAIN, REPAIR AND REPLACE THE FACILITIES LOCATED IN THE EASEMENT AREAS. GRANTEE SHALL PROMPTLY BACKFILL ANY TRENCH MADE BY IT AND REPAIR ANY DAMAGE CAUSED BY IT INCLUDING, WITHOUT LIMITATION, DAMAGES FROM EXCAVATION OR USE OF THE EASEMENT AREAS, AND INCLUDING (WITHOUT LIMITATION) THE REPAIR AND REPLACEMENT OF PAVEMENT, SIDEWALKS, CURBING, FENCES AND LANDSCAPING, THEREBY RESTORING ANY SUCH AREA SUBSTANTIALLY TO ITS PRIOR CONDITION.

GRANTOR RESERVES (AND GRANTEE ACKNOWLEDGES AND AGREES TO SUCH RESERVATION) THE RIGHT TO USE THE EASEMENT AREAS FOR PURPOSES WHICH WILL NOT INTERFERE WITH GRANTEE'S ENJOYMENT OF ITS RIGHTS HEREBY GRANTED; SPECIFICALLY, GRANTOR SHALL HAVE THE RIGHT TO CONSTRUCT AND/OR INSTALL PAVEMENT FOR PARKING AND DRIVE AREAS, CURBING, SIDEWALKS, LANDSCAPING, FENCING AND SUCH OTHER SIMILAR FEATURES, BUT IN NO EVENT SHALL GRANTOR CONSTRUCT OR EFFECT ANY BUILDING OR OTHER STRUCTURE. SUCH FACILITIES SHALL BE LOCATED UNDERGROUND (EXCEPT FOR FACILITIES REQUIRED TO BE ABOVE GROUND, WHICH WILL BE LOCATED IN LANDSCAPED PORTIONS OF THE EASEMENT AREAS ONLY). AFTER INSTALLATION OF ANY UTILITY FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF. THE LOCATION OF FACILITIES BY GRANTEES SHALL NOT CONFLICT OR INTERFERE WITH PUBLIC IMPROVEMENTS AND ANY CONFLICTS IN USE SHALL BE SUBJECT TO RESOLUTION AND APPROVAL OF THE GRANTEES.

WATERMAIN EASEMENT PROVISION:
A PERMANENT, NON-EXCLUSIVE EASEMENT FOR WATER SERVICE FOR THE SUBDIVISION OWNER/OWNERS OF LOT 1 AND LOT 2 HEREINAFTER "GRANTOR") IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF PALATINE, ILLINOIS.

THE GRANTING OF THE FOREGOING EASEMENT CONFERS NO OBLIGATION ON THE VILLAGE OF PALATINE (HEREINAFTER "GRANTEE") TO MAINTAIN, REPAIR, REPLACE, RELOCATE, OR REMOVE ANY OF THE FOREGOING.

THE EASEMENT PROVISIONS ALLOW THE GRANTOR OR THE GRANTEE ACCESS TO INSTALL, OPERATE, MAINTAIN, RELOCATE AND REMOVE, FROM TIME TO TIME, PIPES AND OTHER WATER FACILITIES USED IN CONNECTION WITH UNDERGROUND DISTRIBUTION OF WATER IN, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF:

(I) THE PROPERTY SHOWN AS AND/OR LABELED AS "WATERMAIN EASEMENT," WITHIN DASHED LINES ON THE ATTACHED PLAT OF SUBDIVISION AND

(II) PROPERTY DESIGNATED ON THE PLAT AS PUBLICLY DEDICATED STREETS AND ALLEYS (THE PROPERTY DESCRIBED IN (I) AND (II) HEREINAFTER THE "EASEMENT AREAS"), TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS UNDER THE SURFACE OF SUCH EASEMENT AREAS TO SERVE IMPROVEMENTS ON THE SUBDIVISION LOTS, THE RIGHT TO CUT, TRIM, OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON SUCH EASEMENT AREAS FOR ALL SUCH PURPOSES.

GRANTEE MAY MAINTAIN, REPAIR AND REPLACE THE FACILITIES LOCATED IN THE EASEMENT AREAS. GRANTEE SHALL PROMPTLY BACKFILL ANY TRENCH MADE BY IT AND REPAIR ANY DAMAGE CAUSED BY IT INCLUDING, WITHOUT LIMITATION, DAMAGES FROM EXCAVATION OR USE OF THE EASEMENT AREAS, AND INCLUDING (WITHOUT LIMITATION) THE REPAIR AND REPLACEMENT OF PAVEMENT, SIDEWALKS, CURBING, FENCES AND LANDSCAPING, THEREBY RESTORING ANY SUCH AREA SUBSTANTIALLY TO ITS PRIOR CONDITION.

GRANTOR RESERVES (AND GRANTEE ACKNOWLEDGES AND AGREES TO SUCH RESERVATION) THE RIGHT TO USE THE EASEMENT AREAS FOR PURPOSES WHICH WILL NOT INTERFERE WITH GRANTEE'S ENJOYMENT OF ITS RIGHTS HEREBY GRANTED; SPECIFICALLY, GRANTOR SHALL HAVE THE RIGHT TO CONSTRUCT AND/OR INSTALL PAVEMENT FOR PARKING AND DRIVE AREAS, CURBING, SIDEWALKS, LANDSCAPING, FENCING AND SUCH OTHER SIMILAR FEATURES, BUT IN NO EVENT SHALL GRANTOR CONSTRUCT OR EFFECT ANY BUILDING OR OTHER STRUCTURE. SUCH FACILITIES SHALL BE LOCATED UNDERGROUND (EXCEPT FOR FACILITIES REQUIRED TO BE ABOVE GROUND, WHICH WILL BE LOCATED IN LANDSCAPED PORTIONS OF THE EASEMENT AREAS ONLY). AFTER INSTALLATION OF ANY UTILITY FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF. THE LOCATION OF FACILITIES BY GRANTEES SHALL NOT CONFLICT OR INTERFERE WITH PUBLIC IMPROVEMENTS AND ANY CONFLICTS IN USE SHALL BE SUBJECT TO RESOLUTION AND APPROVAL OF THE GRANTEES.

CROSS ACCESS EASEMENT PROVISIONS:

A CROSS ACCESS EASEMENT HEREBY RESERVED AND GRANTED TO THE OWNERS, THEIR INVITEES, AND THEIR RESPECTIVE SUCCESSORS OR ASSIGNS. FOR THE BENEFIT OF THE LOTS AS DESIGNATED OVER AND ACROSS THE AREA LABELED "CROSS ACCESS EASEMENT". SAID EASEMENT SHALL NOT BE CLOSED FOR ANY REASON EXCEPT EMERGENCY REPAIRS.

PERPETUAL EASEMENT PROVISIONS:

A PERPETUAL EASEMENT IS HEREBY RESERVED IN, OVER AND UPON THAT PART OF THE WEST 20 FEET OF LOT 2 IN PALATINE INDUSTRIAL SUBDIVISION FOR THE USE AND BENEFIT OF THE VILLAGE OF PALATINE AND THE PUBLIC FOR STREET, ROAD AND HIGHWAY PURPOSES.

COOK COUNTY CLERK

STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT I, C. BRIAN LOUNSBURY, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED AND SUBDIVIDED THE FOLLOWING DESCRIBED PROPERTY:

PARCEL 1:
LOTS 1 AND 2 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

EXCEPTING THEREFROM THAT PART OF LOT 1 DESCRIBED AS FOLLOWS:

COMMENCING ON THE WEST LINE THEREOF AND 407.0 FEET NORTH OF THE SOUTH WEST CORNER THEREOF; THENCE EAST AND PARALLEL TO THE SOUTH LINE THEREOF, 10.0 FEET FOR A PLACE OF BEGINNING; THENCE CONTINUING EAST PARALLEL TO THE SOUTH LINE OF SAID LOT 1, 200.08 FEET TO A POINT; THENCE NORTH AND PARALLEL TO THE WEST LINE THEREOF, 99.67 FEET TO A POINT OF CURVE; THENCE NORTHWESTERLY ON A CURVE CONVEX TO THE NORTH EAST HAVING A RADIUS OF 399.27 FEET AN ARC DISTANCE OF 122.23 FEET TO A POINT THAT IS 627.0 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE WEST AND PARALLEL TO THE SOUTH LINE THEREOF, 181.52 FEET TO A POINT THAT IS 10.0 FEET EAST OF THE WEST LINE THEREOF; THENCE SOUTH AND PARALLEL TO SAID WEST LINE, 220.0 FEET TO THE POINT OF BEGINNING, ALL IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

ALSO EXCEPTING THAT PART DESCRIBED AS FOLLOWS:

THAT PART OF THE EAST 316 FEET OF LOT 1 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT (HEREINAFTER REFERRED TO AS "INDUSTRIAL DISTRICT"), BEING A SUBDIVISION OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING NORTH OF A LINE 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1;

ALSO EXCEPTING THAT PART OF SAID LOT 1 DESCRIBED AS FOLLOWS:

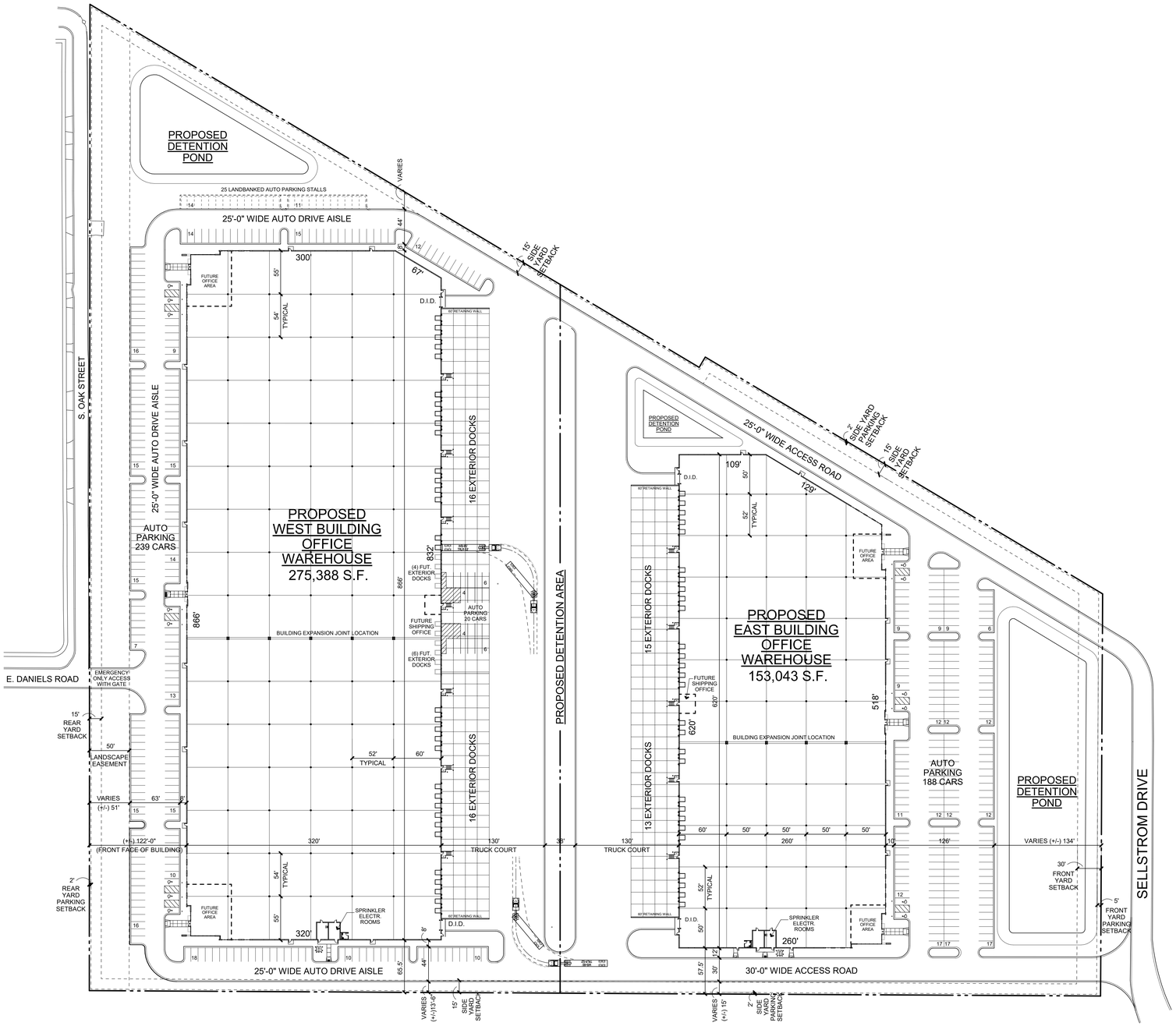
BEGINNING AT A POINT IN SAID LOT 1 WHICH IS 316 FEET WEST OF THE EAST LINE OF SAID LOT 1 AND 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1 AS A PLACE OF BEGINNING; THENCE NORTH A DISTANCE OF 220 FEET; THENCE WEST A DISTANCE OF 84 FEET; THENCE SOUTH A DISTANCE OF 220 FEET; THENCE EAST A DISTANCE OF 84 FEET TO THE PLACE OF BEGINNING;

ALSO EXCEPTING THAT PART DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN SAID LOT 1 WHICH IS 400 FEET WEST OF THE EAST LINE OF SAID LOT 1 AND 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE NORTH 220 FEET FOR A PLACE OF BEGINNING; THENCE EAST 84 FEET; THENCE NORTH 60 FEET TO THE NORTH LINE; THENCE NORTHWESTERLY ALONG THE NORTH LINE 90 FEET TO THE WEST LINE; THENCE SOUTH ALONG THE WEST LINE TO THE PLACE OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PARCEL 2:
THAT PART OF LOT 1 DESCRIBED AS FOLLOWS:

COMMENCING ON THE WEST LINE THEREOF AND 407 FEET NORTH OF THE SOUTHWEST CORNER THEREOF, THENCE EAST AND PARALLEL TO THE SOUTH LINE THEREOF, 10 FEET FOR A POINT OF BEGINNING; THENCE CONTINUING EAST PARALLEL TO THE SOUTH LINE OF SAID LOT 1, 200.08 FEET TO A POINT; THENCE NORTH AND PARALLEL TO THE WEST LINE THEREOF, 99.67 FEET TO A POINT OF CURVE; THENCE NORTHWEST ON A CURVE CONVEX TO THE NORTHEAST HAVING A RADIUS OF 399.27 FEET, AN ARC DISTANCE OF 122.23 FEET TO A POINT THAT IS 627.00 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE WEST AND PARALLEL TO THE SOUTH LINE THEREOF, 181.52 FEET TO A POINT THAT IS 10.0 FEET EAST OF THE WEST LINE THEREOF; THENCE SOUTH AND PARALLEL TO SAID WEST LINE 220.0 FEET TO THE POINT OF BEGINNING, ALL IN ARTHUR T. MC INTOSH AND CO'S LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2



PROJECT SITE PLAN

SCALE: 1" = 60'-0"

1 / A1.0

NORTH

GENERAL SITE NOTES:

1. SEE CIVIL ENGINEERING DRAWINGS FOR OTHER NOTES AND DETAILS.
2. ALL DIMENSIONS ARE FROM BACK OF CURB OR BUILDING UNLESS NOTED OTHERWISE.
3. SEE CIVL ENGINEERING DRAWINGS FOR EXTENT OF SITE DEMOLITION WORK.
4. EXACT LOCATION OR PLACEMENT OF NEW BLDG. INDICATED ABOVE SHALL BE DETERMINED BY LAND SURVEYOR HIRED BY G.C. AND SHALL COORDINATE & INFORM THE ARCHITECT OF ANY DISCREPANCY PRIOR TO STARTIG WORK.

BUILDING YARD AND PAVEMENT SETBACK REQUIREMENTS

ZONING - "M" LIGHT MANUFACTURING

LIGHT MANUFACTURING YARD SETBACK REQUIREMENTS	
FRONT YARD BUILDING SETBACK	30'-0"
SIDE YARD BUILDING SETBACK	15'-0"
REAR YARD BUILDING SETBACK	15'-0"

LIGHT MANUFACTURING PAVEMENT SETBACK REQUIREMENTS	
FRONT YARD PAVEMENT SETBACK	5'-0"
SIDE YARD PAVEMENT SETBACK	2'-0"
REAR YARD PAVEMENT SETBACK	2'-0"

SITE DATA FOR EAST BUILDING

TOTAL SITE AREA (±25.39 AC.)	±1,105,841 S.F.
EAST SITE AREA (±10.96 AC.)	±477,212 S.F.
PROPOSED DETENTION	TO BE DETERMINED
BUILDING AREA	
PROPOSED OFFICE AREA (2.0%)	3,060 S.F.
PROPOSED WAREHOUSE AREA	149,983 S.F.
TOTAL BUILDING AREA	153,043 S.F.
EXTERIOR DOCKS	
EXTERIOR DOCKS PROVIDED	28 DOCKS
DRIVE IN OVERHEAD DOORS	2 DOORS
BUILDING HEIGHT	
BUILDING HEIGHT AT EAST DOCKS	37'-0" A.F.F.
BUILDING HEIGHT AT NORTH/SOUTH OFFICE PERIMETER	43'-0" A.F.F.
GENERAL BUILDING HEIGHT AT OFFICE PARAPET	45'-4" A.F.F.
BUILDING INTERIOR CLEAR HEIGHT	32'-0"
MAXIMUM FLOOR AREA RATIO (F.A.R.) ALLOWED	70%
FLOOR AREA RATIO (F.A.R.) PROVIDED	32.07%
CAR PARKING REQUIREMENTS	
OFFICE USE REQUIREMENTS	
1 SPACES FOR EACH 300 S.F. (ASSUME 3,060 S.F.)	11 STALLS
MANUFACTURING, WAREHOUSE AND STORAGE USE REQUIREMENTS	
1 SPACE PER 1,000 S.F. WAREHOUSE GROSS FLOOR AREA (ASSUME 149,983 S.F. REMAINING WAREHOUSE AREA)	150 STALLS
TOTAL CAR PARKING REQUIRED	161 STALLS
CAR PARKING PROVIDED (INCLUDES 6 HC STALLS)	188 STALLS

SITE DATA FOR WEST BUILDING

TOTAL SITE AREA (±25.39 AC.)	±1,105,841 S.F.
WEST SITE AREA (±14.43 AC.)	±628,629 S.F.
PROPOSED DETENTION	TO BE DETERMINED
BUILDING AREA	
PROPOSED OFFICE AREA (2.0%)	5,512 S.F.
PROPOSED WAREHOUSE AREA	269,876 S.F.
TOTAL BUILDING AREA	275,388 S.F.
MAXIMUM FLOOR AREA RATIO (F.A.R.) ALLOWED	70%
FLOOR AREA RATIO (F.A.R.) PROVIDED	43.8%
EXTERIOR DOCKS	
EXTERIOR DOCKS PROVIDED	32 DOCKS
FUTURE DOCKS PROVIDED	10 DOCKS
TOTLAL POTENTIAL EXTERIOR DOCKS	42 DOCKS
DRIVE IN OVERHEAD DOORS	2 DOORS
BUILDING HEIGHT	
BUILDING INTERIOR CLEAR HEIGHT	32'-0"
BUILDING HEIGHT AT EAST DOCK WALL	37'-3" A.F.F.
BUILDING HEIGHT AT NORTH/SOUTH OFFICE PARAPET	40'-3" A.F.F.
BUILDING HEIGHT ALONG NORTH/SOUTH ELEVATION	37'-3" A.F.F.
BUILDING HEIGHT ALONG WEST ELEVATION	

PER VILLAGE BUILDING HEIGHTS STANDARDS:
EXCEPT FOR CHIMNEYS, VENTS, FLAG POLES OR COMMUNICATION DEVICES, NO PORTION OF ANY BUILDING OR STRUCTURE SHALL HAVE A VERTICAL DIMENSION FROM GROUND LEVEL TO IT'S HIGHEST POINT GREATER THAN (1/3) THE DISTANCE FROM SAID PORTION OF THE BUILDING TO ANY RESIDENTIAL LAND.

THE DISTANCE FROM THE RESIDENTIAL PROPERTY LINE TO THE WEST BUILDING FACADE IS 122'-0". THEREFORE THE MAXIMUM BUILDING HEIGHT ALONG THIS ELEVATION CAN BE (122'-0" x 0.33 = 40'-3")

PROPOSED BUILDING HEIGHT ALONG WEST ELEVATION	
HEIGHT ALONG MAJORITY OF WEST ELEVATION	37'-3" A.F.F.
HEIGHT AT NORTH/SOUTH OFFICE PARAPET	40'-3" A.F.F.
CAR PARKING REQUIREMENTS	
OFFICE USE REQUIREMENTS	
1 SPACES FOR EACH 300 S.F. (ASSUME 5,512 S.F.)	19 STALLS
MANUFACTURING, WAREHOUSE AND STORAGE USE REQUIREMENTS	
1 SPACE PER 1,000 S.F. WAREHOUSE GROSS FLOOR AREA (ASSUME 270,046 S.F. REMAINING WAREHOUSE AREA)	270 STALLS
TOTAL CAR PARKING REQUIRED	289 STALLS
CAR PARKING PROVIDED (INCLUDES 8 HC STALLS)	259 STALLS
LANDBANKED CAR SPACES PROVIDED	25 STALLS
TOTAL CAR PARKING PARKING	284 STALLS

MIDWEST INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

HARRIS ARCHITECTS INC.
4601 EMERSON AVENUE PALATINE, ILLINOIS 60067-7416 847.303.1155
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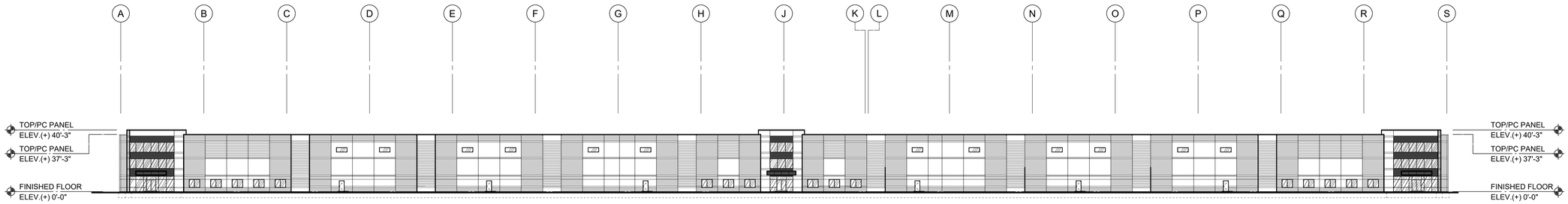
PROPOSED OFFICE & WAREHOUSE BUILDINGS AT:
PALATINE CORPRATE CENTER
SELLSTROM DRIVE
PALATINE, ILLINOIS

ISSUED FOR VILLAGE DEVELOPMENT REVIEW	07-07-2020
ISSUED FOR PRELIMINARY BIDS	07-10-2020
RE-ISSUED FOR VILLAGE REVIEW	08-14-2020
RE-ISSUED FOR VILLAGE REVIEW	10-23-2020

PROJECT NO. 220067
DRAWN BY: DJK
DATABASE: 220067PLAN.DB

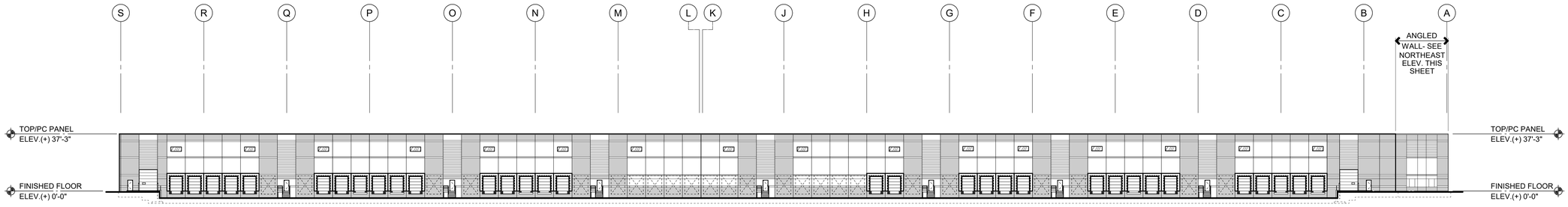
SHEET NO. A1.0
2 OF X SHEETS

Attachment: Revised Site Plan. Palatine. 10.23.20 (220, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. : FPD, PFS, RZ)



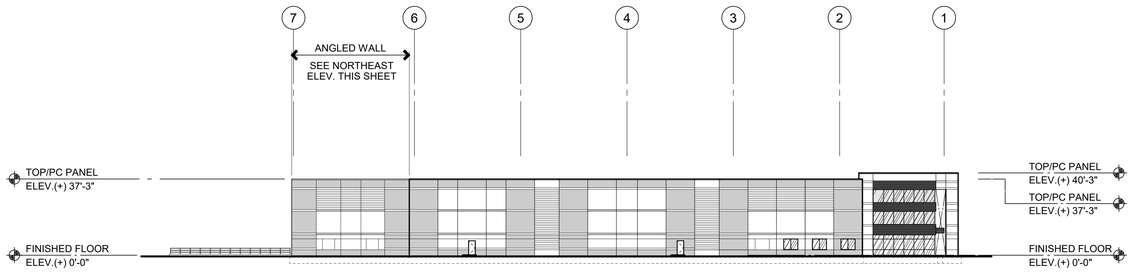
WEST ELEVATION

SCALE: 1" = 30'-0"



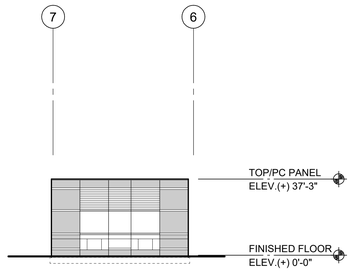
EAST ELEVATION

SCALE: 1" = 30'-0"



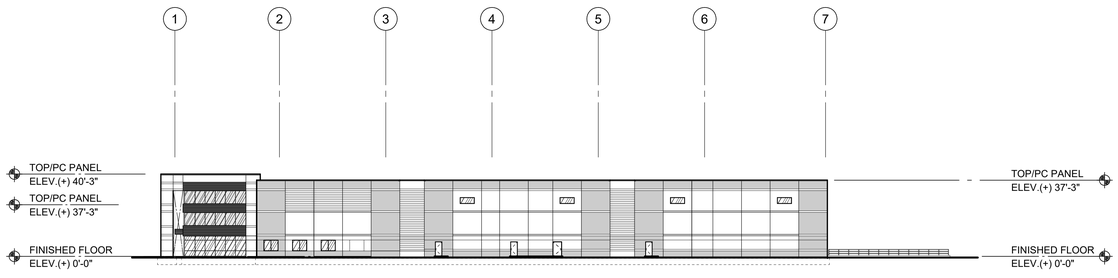
NORTH ELEVATION

SCALE: 1" = 30'-0"



NORTHEAST ELEVATION

SCALE: 1" = 30'-0"



SOUTH ELEVATION

SCALE: 1" = 30'-0"

COLOR LEGEND

EXTERIOR PRECAST TO BE COLORED WITH LOXON VERTICAL CONCRETE STAIN BY SHERWIN WILLIAMS. GENER CONTRACTOR TO MATCH SHERWIN WILLIAMS COLORS SELECTED BELOW.

- SABLE (PLD-6) CUSTOM COLOR
- STAMPED CONCRETE - SW 7655 SHERWIN WILLIAMS
- IRON ORE - (SW 7069) SHERWIN WILLIAMS

METAL COPING (STONE WHITE BY PAC-CLAD)

CURTAINWALL AND ENTRANCE DOOR SYSTEM
FRAMES - CLEAR ANODIZED ALUMINUM
INSUL. GLASS - GREY TINTED

PUNCHED/CLEARSTORY WINDOWS
FRAMES - CLEAR ANODIZED ALUMINUM
INSUL. GLASS - GREY TINTED

INSUL. MTL. DOORS/FRAMES
FRAME - INCREDIBLE WHITE - SW7028
DOOR - INCREDIBLE WHITE - SW7028

OVERHEAD DOORS
DRIVE-IN DOORS - PREFINISHED WHITE
DOCK DOORS - PREFINISHED WHITE

PIPE BOLLARDS
SAFETY YELLOW

WEST BUILDING ELEVATIONS

MIDWEST INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

HARRIS ARCHITECTS INC.
401 EMERSON AVENUE PALATINE, ILLINOIS 60067-5416 847.303.1155
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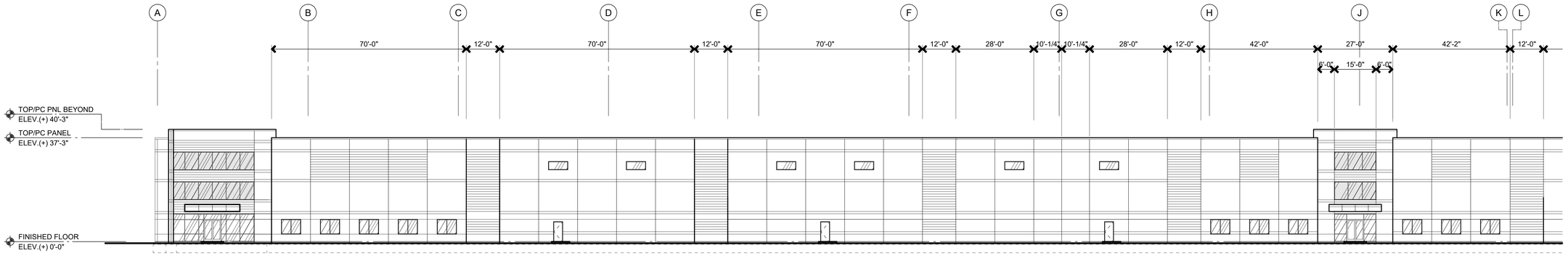
PROPOSED 275,388 S.F. OFFICE/WAREHOUSE WEST BUILDING AT:
PALATINE CORPRATE CENTER
SELLSTROM DRIVE
PALATINE, ILLINOIS

ISSUED FOR VILLAGE DEVELOPMENT REVIEW	07-07-2020
ISSUED FOR PRELIMINARY PLAN REVIEW	07-21-2020
RE-ISSUED FOR VILLAGE REVIEW	08-31-2020

PROJECT NO. 220067
DRAWN BY: DJK
DATABASE: 220067PLAN.DB

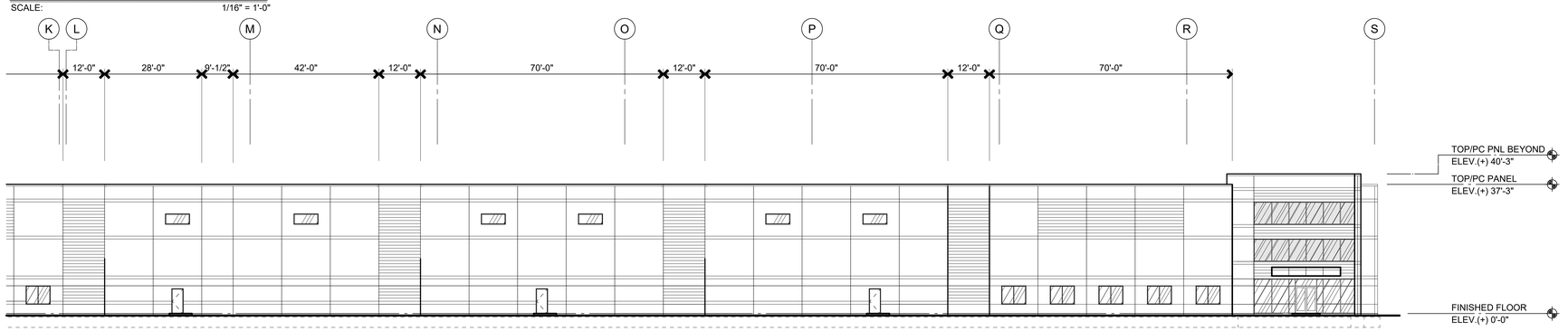
SHEET NO. A2.0C
X OF X SHEETS

Attachment: Palatine Corporate Center Building Elevations_8.31.2020 (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. : FPD, PFS, R2)



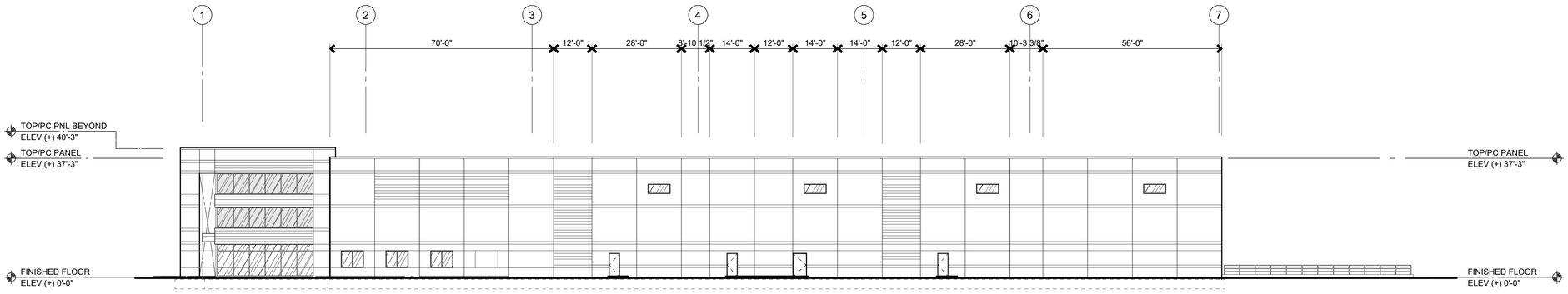
PARTIAL WEST ELEVATION

SCALE: 1/16" = 1'-0"



PARTIAL WEST ELEVATION

SCALE: 1/16" = 1'-0"



SOUTH ELEVATION

SCALE: 1/16" = 1'-0"

WEST BUILDING ELEVATIONS

COMPONENTS & CLADDING FACTORED WIND DESIGN WALL PRESSURES (PSF)					
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)				
	10	20	50	100	500
4	+35.3/-38.3	+33.8/-36.8	+31.7/-35.3	+29.9/-31.1	+26.3/-29.3
5	+35.3/-47.3	+33.8/-44.3	+31.7/-39.8	+29.9/-33.8	+26.3/-29.3

NOTE: ZONE 5 APPLIES WITHIN 16'-0" OF CORNERS, ZONE 4 APPLIES ELSEWHERE

MIDWEST INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

HARRIS ARCHITECTS INC.
4801 EMERSON AVENUE PALATINE, ILLINOIS 60067 (847) 303-1155
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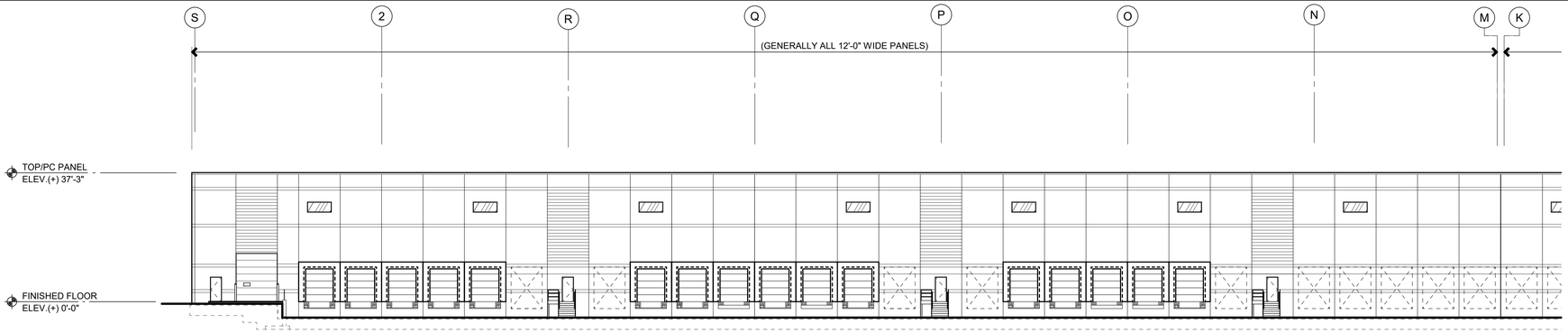
PROPOSED 275,388 S.F. OFFICE/WAREHOUSE WEST BUILDING AT:
PALATINE CORPRATE CENTER
SELLSTROM DRIVE PALATINE, ILLINOIS

ISSUED FOR VILLAGE DEVELOPMENT REVIEW 07-07-2020
RE-ISSUED FOR PUBLIC MEETING 07-31-2020
RE-ISSUED FOR VILLAGE REVIEW 08-31-2020

PROJECT NO. 220067
DRAWN BY: DJK
DATABASE: 220067PLAN.DB

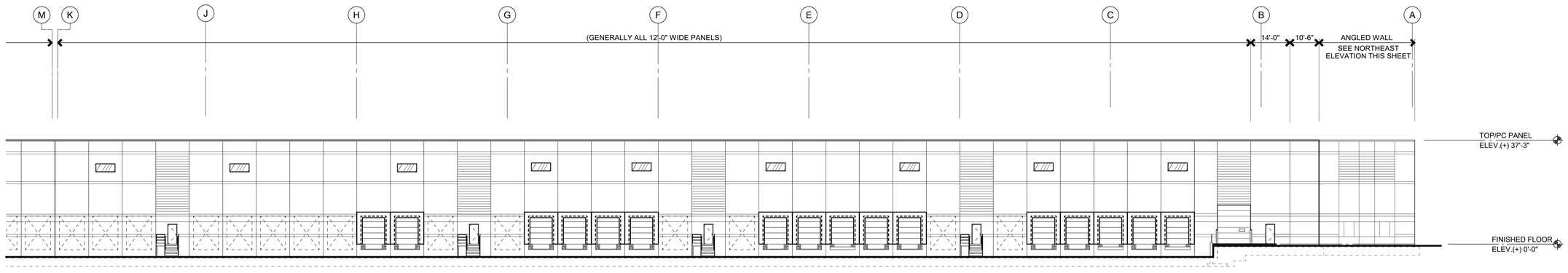
SHEET NO. A2.1
X OF X SHEETS

Attachment: Palatine Corporate Center Building Elevations_8.31.2020 (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



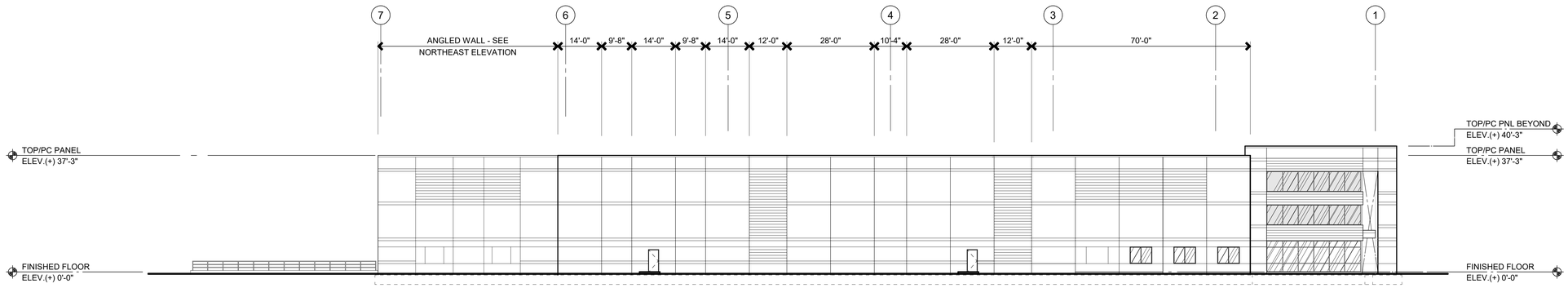
PARTIAL EAST ELEVATION

SCALE: 1/16" = 1'-0"



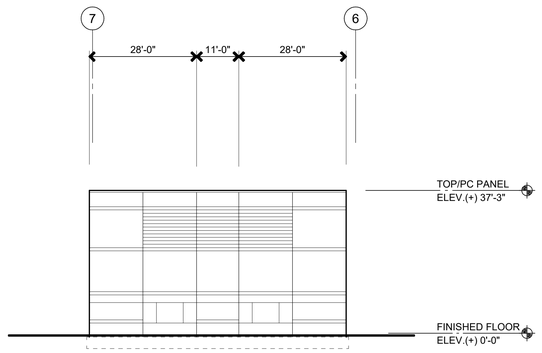
PARTIAL EAST ELEVATION

SCALE: 1/16" = 1'-0"



NORTH ELEVATION

SCALE: 1/16" = 1'-0"



NORTHEAST ELEVATION

SCALE: 1/16" = 1'-0"

WEST BUILDING ELEVATIONS

COMPONENTS & CLADDING FACTORED WIND DESIGN WALL PRESSURES (PSF)					
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)				
	10	20	50	100	500
4	+35.3/-38.3	+33.8/-36.8	+31.7/-35.3	+29.9/-31.1	+26.3/-29.3
5	+35.3/-47.3	+33.8/-44.3	+31.7/-39.8	+29.9/-33.8	+26.3/-29.3

NOTE: ZONE 5 APPLIES WITHIN 16'-0" OF CORNERS, ZONE 4 APPLIES ELSEWHERE

MIDWEST INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

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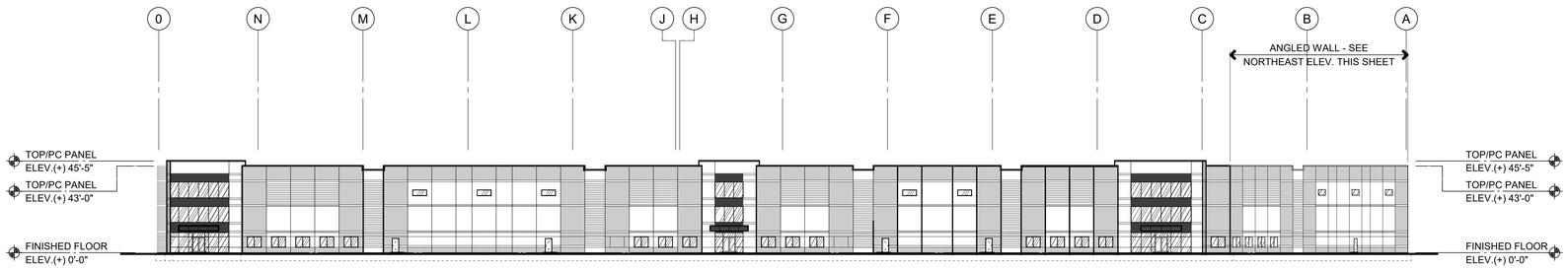
PROPOSED 275,388 S.F. OFFICE/WAREHOUSE WEST BUILDING AT:
PALATINE CORPRATE CENTER
SELLSTROM DRIVE
PALATINE, ILLINOIS

ISSUED FOR VILLAGE DEVELOPMENT REVIEW	07-07-2020
ISSUED FOR PRELIMINARY BOARD REVIEW	07-31-2020
RE-ISSUED FOR VILLAGE REVIEW	08-31-2020

PROJECT NO. 220067
DRAWN BY: DJK
DATABASE: 220067PLAN.DB

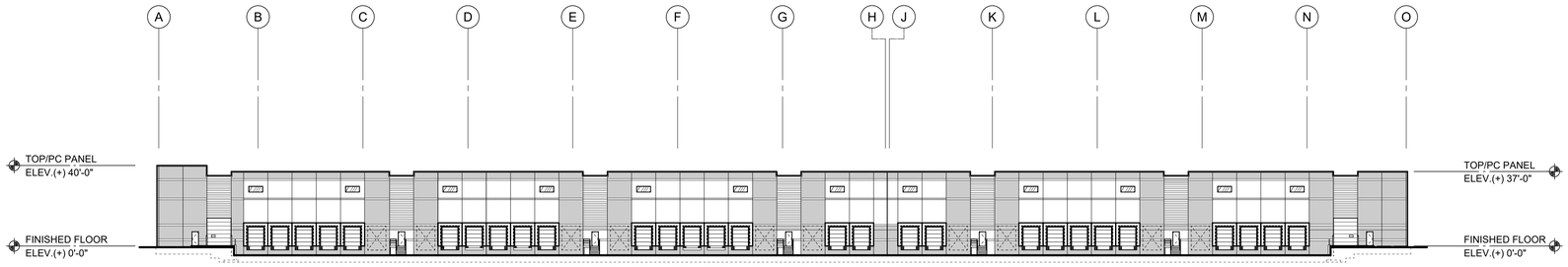
SHEET NO.
A2.2
X OF X SHEETS

Attachment: Palatine Corporate Center Building Elevations 8.31.2020 (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



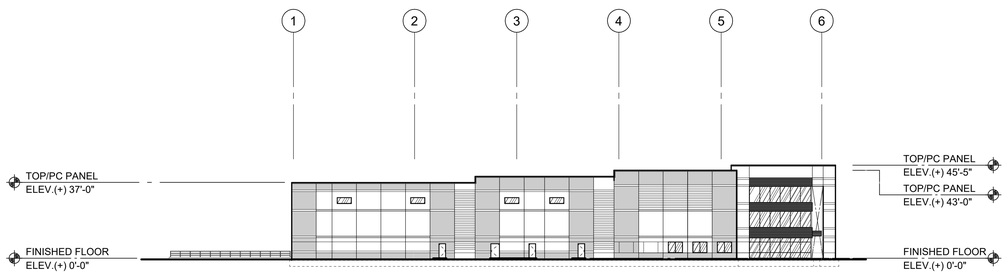
EAST ELEVATION

SCALE: 1" = 30'-0"



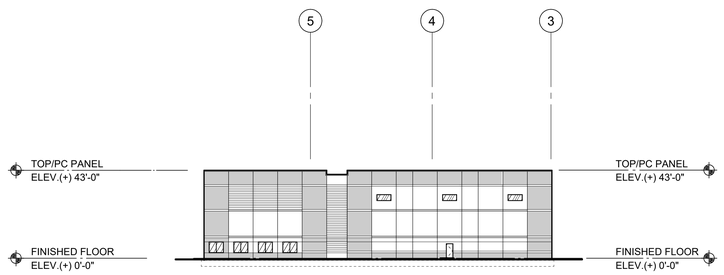
WEST ELEVATION

SCALE: 1" = 30'-0"



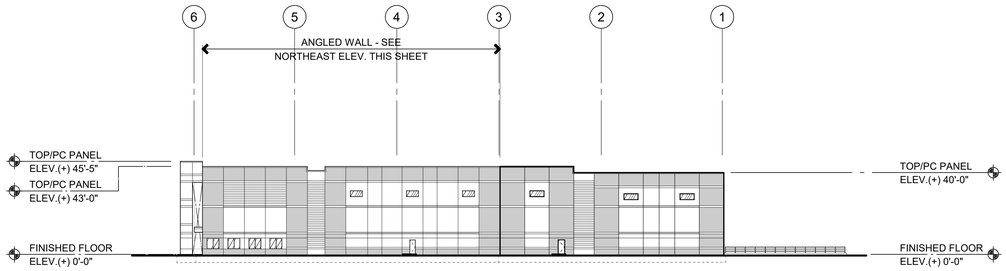
SOUTH ELEVATION

SCALE: 1" = 30'-0"



NORTHEAST ELEVATION

SCALE: 1" = 30'-0"



NORTH ELEVATION

SCALE: 1" = 30'-0"

COLOR LEGEND

EXTERIOR PRECAST TO BE COLORED WITH LOXON VERTICAL CONCRETE STAIN BY SHERWIN WILLIAMS. GENER CONTRACTOR TO MATCH SHERWIN WILLIAMS COLORS SELECTED BELOW.

- SABLE (PLD-6) CUSTOM COLOR
- STAMPED CONCRETE - SW 7655 SHERWIN WILLIAMS
- IRON ORE - (SW 7069) SHERWIN WILLIAMS

METAL COPING (STONE WHITE BY PAC-CLAD)

CURTAINWALL AND ENTRANCE DOOR SYSTEM
FRAMES - CLEAR ANODIZED ALUMINUM
INSUL. GLASS - GREY TINTED

PUNCHED/CLEARSTORY WINDOWS
FRAMES - CLEAR ANODIZED ALUMINUM
INSUL. GLASS - GREY TINTED

INSUL. MTL. DOORS/FRAMES
FRAME - INCREDIBLE WHITE - SW7028
DOOR - INCREDIBLE WHITE - SW7028

OVERHEAD DOORS
DRIVE-IN DOORS - PREFINISHED WHITE
DOCK DOORS - PREFINISHED WHITE

PIPE BOLLARDS
SAFETY YELLOW

EAST BUILDING ELEVATIONS

MIDWEST INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

HARRIS ARCHITECTS INC.
4801 EMERSON AVENUE PALATINE, ILLINOIS 60067 (847) 303-1155
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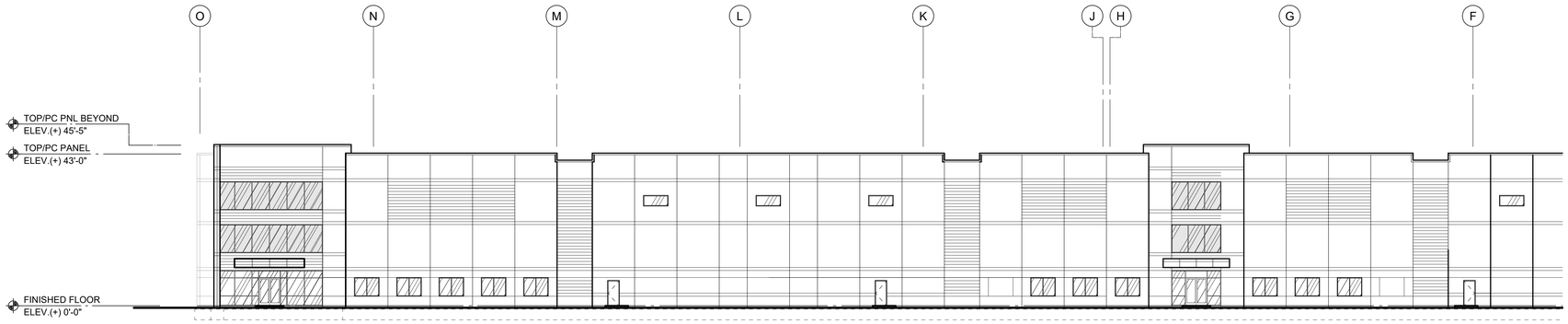
PROPOSED OFFICE & WAREHOUSE BUILDINGS AT:
PALATINE CORPRATE CENTER
SELLSTROM DRIVE
PALATINE, ILLINOIS

ISSUED FOR VILLAGE DEVELOPMENT REVIEW	07-07-2020
ISSUED FOR PRELIMINARY BIDS	07-10-2020
RE-ISSUED FOR VILLAGE REVIEW	08-31-2020

PROJECT NO.
220067
DRAWN BY:
DJK
DATABASE:
220067PLAN.DB

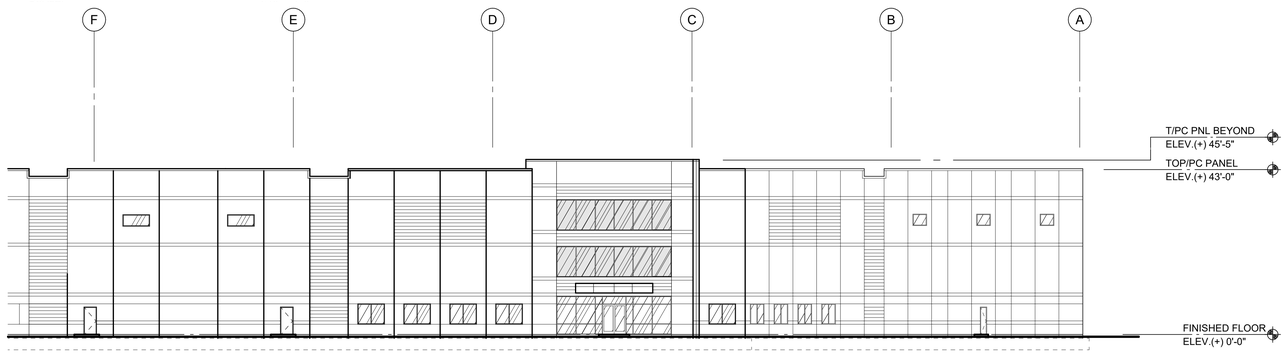
SHEET NO.
A2.0C
X OF X SHEETS

Attachment: Palatine Corporate Center Building Elevations_8.31.2020 (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. : FPD, PFS, R2)



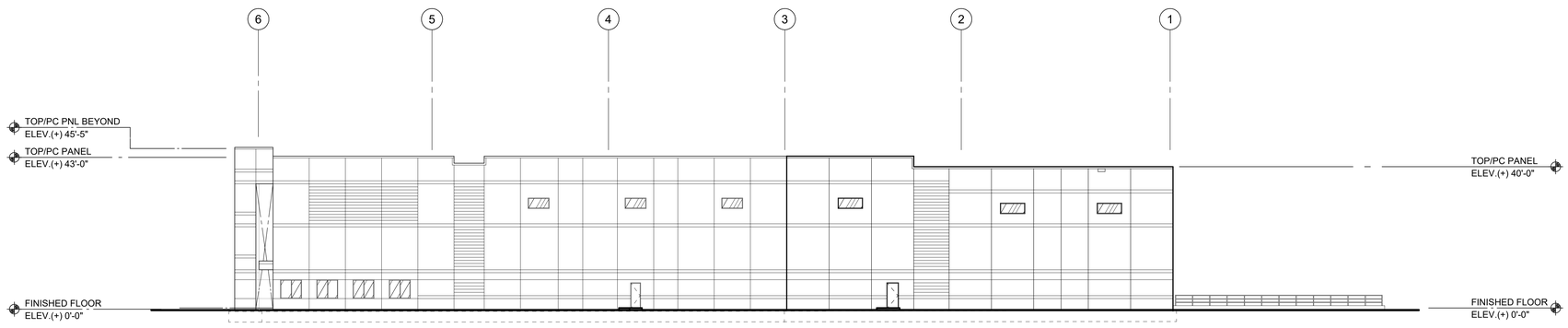
PARTIAL EAST ELEVATION

SCALE: 1/16" = 1'-0"



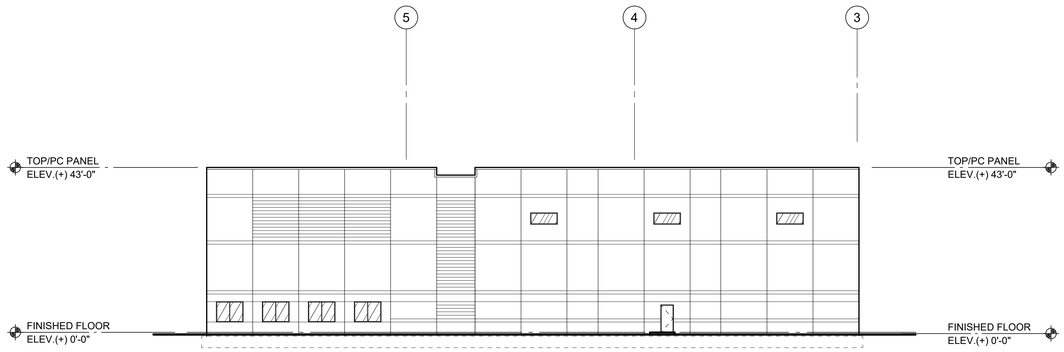
PARTIAL EAST ELEVATION

SCALE: 1/16" = 1'-0"



NORTH ELEVATION

SCALE: 1/16" = 1'-0"



PARTIAL NORTH ELEVATION

SCALE: 1/16" = 1'-0"

COMPONENTS & CLADDING FACTORED WIND DESIGN WALL PRESSURES (PSF)

ZONE	EFFECTIVE WIND AREA (SQUARE FEET)				
	10	20	50	100	500
4	+35.3/-38.3	+33.8/-36.8	+31.7/-35.3	+29.9/-31.1	+26.3/-29.3
5	+35.3/-47.3	+33.8/-44.3	+31.7/-39.8	+29.9/-33.8	+26.3/-29.3

NOTE: ZONE 5 APPLIES WITHIN 16'-0" OF CORNERS, ZONE 4 APPLIES ELSEWHERE

EAST BUILDING ELEVATIONS

MIDWEST INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

HARRIS ARCHITECTS INC.
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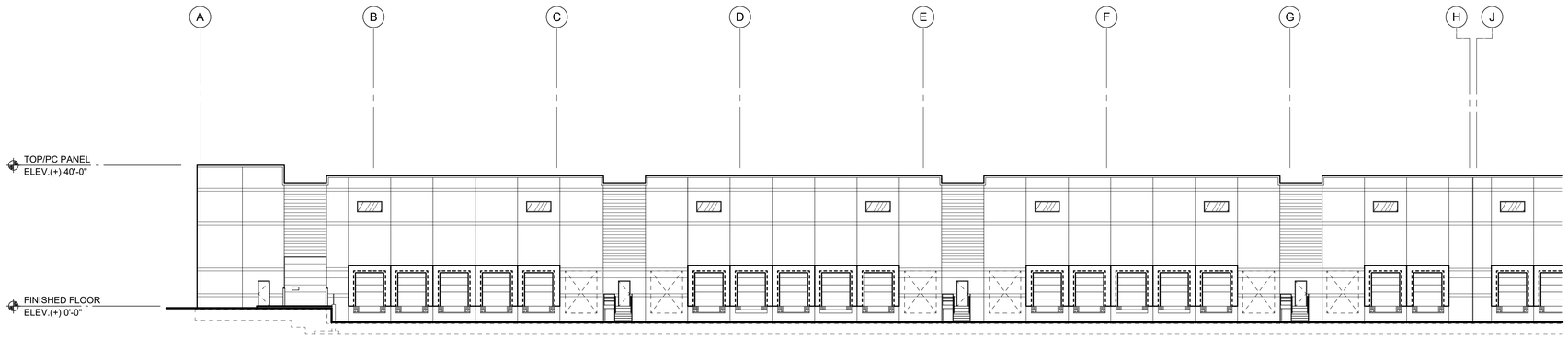
PROPOSED OFFICE & WAREHOUSE BUILDINGS AT:
PALATINE CORPRATE CENTER
SELLSTROM DRIVE PALATINE, ILLINOIS

ISSUED FOR VILLAGE DEVELOPMENT REVIEW	07-07-2020
ISSUED FOR PRELIMINARY BIDS	07-10-2020
RE-ISSUED FOR VILLAGE REVIEW	08-31-2020

PROJECT NO. 220067
DRAWN BY: DJK
DATABASE: 220067PLAN.DB

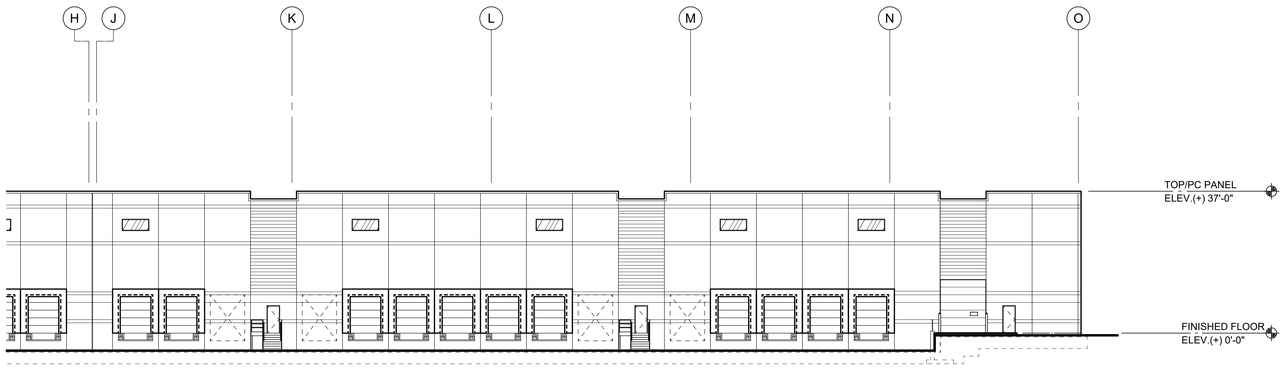
SHEET NO. A2.1
X OF X SHEETS

Attachment: Palatine Corporate Center Building Elevations_8.31.2020 (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



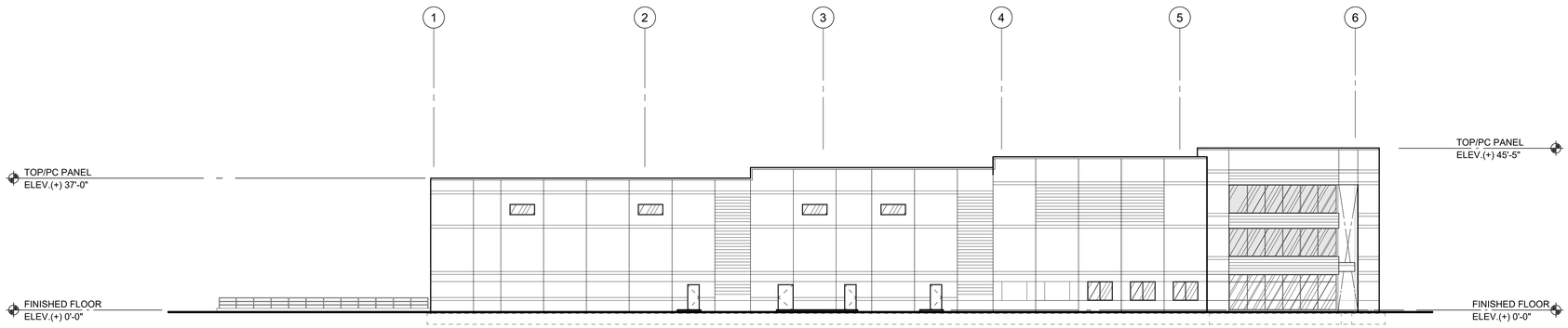
PARTIAL WEST ELEVATION

SCALE: 1/16" = 1'-0"



PARTIAL WEST ELEVATION

SCALE: 1/16" = 1'-0"



SOUTH ELEVATION

SCALE: 1/16" = 1'-0"

EAST BUILDING ELEVATIONS

COMPONENTS & CLADDING FACTORED WIND DESIGN WALL PRESSURES (PSF)					
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)				
	10	20	50	100	500
4	+35.3/-38.3	+33.8/-36.8	+31.7/-35.3	+29.9/-31.1	+26.3/-29.3
5	+35.3/-47.3	+33.8/-44.3	+31.7/-39.8	+29.9/-33.8	+26.3/-29.3

NOTE: ZONE 5 APPLIES WITHIN 16'-0" OF CORNERS, ZONE 4 APPLIES ELSEWHERE

MIDWEST INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

HARRIS ARCHITECTS INC.
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PROPOSED OFFICE & WAREHOUSE BUILDINGS AT:
PALATINE CORPRATE CENTER
SELLSTROM DRIVE
PALATINE, ILLINOIS

ISSUED FOR VILLAGE DEVELOPMENT REVIEW	07-07-2020
ISSUED FOR PRELIMINARY BIDS	07-10-2020
RE-ISSUED FOR VILLAGE REVIEW	08-31-2020

PROJECT NO. 220067
DRAWN BY: DJK
DATABASE: 220067PLAN.DB

SHEET NO. A2.2
X OF X SHEETS

Attachment: Palatine Corporate Center Building Elevations_8.31.2020 (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

CONCEPTUAL ARCHITECTURAL RENDERING

HICKS ROAD

PALATINE, IL

MIDWEST INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

HARRIS ARCHITECTS, INC.
WWW.HARRISARCHITECTS.COM

Attachment: Concept Rendering_Corner_06-15-2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Dock Seal Exhibit

Figure 1 – showing typical dock seal mounted to exterior of building at each dock location

Attachment: Dock Seal Exhibit (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Figure 2 – showing typical dock seal with truck trailer in position.

Attachment: Dock Seal Exhibit (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Kenig,Lindgren,O'Hara,Aboona,Inc.

9575 West Higgins Road, Suite 400 | Rosemont, Illinois 6001
p: 847-518-9990 | f: 847-518-998

Attachment: Traffic Impact Addendum - 19-087 Helen Road Evaluation in Palatine 11-30-2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks

MEMORANDUM TO: Pat Schaner
Midwest Industrial Funds

FROM: Michael A. Werthmann, PE, PTOE
Principal

DATE: November 30, 2020

SUBJECT: Helen Road Traffic Evaluation
Village of Palatine

Per the request of the Village of Palatine, this memorandum summarizes the findings of an evaluation of the operation of Helen Road between Hicks Road and Plum Grove Road. The evaluation examined the existing daily traffic volumes and average and 85th percentile speeds on Helen Road. In addition, alternative traffic calming measures were developed to help mitigate any existing operational issues along the roadway.

Existing Conditions

Existing Roadway Conditions

Helen Road is an east-west, local road that extends approximately 1.5 miles from Hicks Road to Quentin Road and has an off-set intersection at Cedar Street. It has one lane in each direction with parking generally permitted on both sides of the road between Plum Grove Road and Oak Street and prohibited on both sides of the road between Oak Street and Hicks Road. At its signalized intersection with Hicks Road, Helen Road has an exclusive left-turn lane and an exclusive right-turn lane. At its intersection with Plum Grove Road, both approaches of Helen Road have a shared left-turn/through/right-turn lane that are under stop sign control. Helen Road is under the jurisdiction of the Village of Palatine, has a posted speed limit of 25 miles per hour, and is designated as a Class III Truck Route from Oak Street to Hicks Road. It should be noted that majority of Helen Road extends through residential areas except for the eastern portion of Helen Road that provides direct access to eight manufacturing, industrial, and/or warehouse uses.

Existing Daily Traffic Volumes and Speed Surveys

To determine the existing daily traffic volumes and the travel speeds along Helen Road, the Village of Palatine performed daily traffic counts and speed surveys at the following locations on Helen Road:

- The block between Plum Grove Road and Hale Street
- The block between Hale Street and Benton Street
- The block between Benton Street and Oak Street
- The block east of Oak Street

Attachment: Traffic Impact Addendum - 19-087 Helen Road Evaluation in Palatine 11-30-2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks

The daily traffic counts and speed surveys were generally performed on two different days in October 2020. **Table 1** shows the results of the daily traffic counts and speed surveys by direction.

Table 1
HELEN ROAD EXISTING DAILY TRAFFIC VOLUMES AND SPEED SURVEYS

	West of Hale	Hale to Benton	Benton to Oak	East of Oak
Daily Volumes				
Eastbound	709	754/778	774/802	782/845
Westbound	477	885/960	961/975	894/955
Total	**1,186**	**1,639/1,738**	**1,735/1,777**	**1,676/1,800**
Peak Hour Volumes				
Eastbound	26	26/28	26/29	26/35
Westbound	40	36/42	33/45	35/43
Total	**66**	**62/70**	**59/74**	**61/78**
Average Speed				
Eastbound	25	28/29	31/31	30/31
Westbound	27	29/30	28/29	27/30
85th Percentile Speed				
Eastbound	29	33/33	37/38	35/38
Westbound	32	32/33	32/37	32/38

It should be noted that the daily traffic counts/speed studies were performed during the Covid-19 pandemic. As such, the traffic volumes may be lower than normal conditions. The results of the daily traffic counts and speed studies revealed the following:

- According to *Residential Streets*[1], a residential local road has a daily traffic volume of 400 to 1,500 vehicles. Residential collector roads generally have a daily traffic volume that exceed 1,500 vehicles. As such, the daily traffic volumes on Helen Road exceed the residential local road traffic volumes by 139 to 330 vehicles per day. However, it is important to note that, due to the following, Helen Road functions more similar to collector road than a local road:
    - The eastern portion of Helen Road provides direct access to eight commercial and manufacturing uses that generate significantly more traffic than residential uses.

[1] *Residential Streets*, Third Edition, 2001 was developed by the National Association of Home Builders (NAHB), the American Society of Civil Engineers (ASCE), the Institute of Transportation Engineers (ITE), and the Urban Land Institute (ULI)

Attachment: Traffic Impact Addendum - 19-087 Helen Road Evaluation in Palatine 11-30-2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks

- Helen Road extends for approximately 1.5 miles between Hicks Road to Quentin Road and has access to a north-south major collector road (Hicks Road), a north-south minor arterial road (Plum Grove Road), and a north-south arterial road (Quentin Road). Further, it is the only east-west road that extends between Hicks Road and Cedar Street from Illinois Street on the south to Palatine Road on the north. In addition, it is under traffic signal control at its intersection with Hicks Road.

- The peak hour volumes on the road range from 59 to 74 vehicles per hour, which is low considering that each of the commuter morning and the evening peak hour volumes typically account for eight to 12 percent of the daily traffic volumes.

- The average speeds on Helen Road ranged between 25 to 31 mph, which is up to six mph over the 25-mph posted speed limit. Further, the 85th percentile speeds ranged between 29 and 38 mph, which is nine to 13 mph over the posted speed limit.

As such, it can be seen that the traffic volumes on Helen Road are generally appropriate or reasonable given the land uses along Helen Road and the function it serves within the existing roadway system. However, both the average speeds and the 85th percentile speeds are higher than the posted 25-mph speed limit.

Alternative Traffic Calming Measures

Per the request of the Village of Palatine, KLOA, Inc. examined potential traffic calming measures that can be implemented to address any issues along Helen Road. Given that the travel speeds as opposed to the traffic volumes is the primary issue, the proposed traffic calming measures focused on those that have the greatest impact on travel speeds. However, it is important to note that the traffic calming measures are effective in reducing traffic volumes. The following summarizes and **Figure 1** illustrates some of the alternative traffic calming measures for Helen Road:

- Install a skipped dash centerline on Helen Road between Plum Grove Road and Hicks Road which reduces the width of the lanes, making drivers feel more restricted and inducing lower travel speeds.

- Install larger speed limit signs and/or yellow bordered speed limit sign on each of the blocks between Plum Grove Road and Hicks Road except the block between Benton Street and Oak Street to notify and remind drivers of the legal speed limit.

- Install radar speed detection signs facing each direction on the block between Benton Street and Hale Street which will visually show motorists how fast they are traveling.

- Implement targeted speed enforcement along Helen Road to enforce the existing speed limits which can include police patrols and police patrol decoys.

- Install speed limit pavement markings on Helen Road which are numerals applied in the traffic lane to remind drivers of the regulatory speed limit.

LEGEND
- CENTERLINE

SCALE: N.T.S.

DANIELS ROAD

HELEN ROAD

PLUM GROVE ROAD

HALE STREET

BENTON STREET

OAK STREET

HICKS ROAD

SPEED LIMIT 25

YOUR SPEED XX

Cook County GIS D

PROPOSED WAREHOUSE DEVELOPMENT PALATINE, ILLINOIS

HELEN ROAD ALTERNATIVE TRAFFIC CALMING MEASURES

DRAWN: MD CHECKED: MW
DATE: 11-21-20 REV:
PROJECT # 20-126
FIGURE: A

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Attachment: Traffic Impact Addendum - 19-087 Helen Road Evaluation in Palatine 11-30-2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks

Attachment: Traffic Impact Addendum - 19-087 Helen Road Evaluation in Palatine 11-30-2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks

Impact of Warehouse/Distribution Development on Helen Road

Due to the following, it is anticipated that proposed warehouse/distribution development to be located on the west side of Hicks Road north of Helen Road will generate a low volume of traffic on Helen Road, which will minimize is impact on the operation of the road:

- The warehouse/distribution development will not have direct access to Helen Road. Access will only be provided via the signalized intersection on Hicks Road located north of Helen Road.

- Given the truck restrictions on Helen Road west of Oak Street, no truck traffic will be using Helen Road. Only passenger vehicle traffic generated by the warehouse/distribution development is permitted to use Helen Road.

It is important to note that the subject site is currently zoned Manufacturing (M) and has previously contained and is permitted by right to contain various manufacturing, industrial, and warehouse type uses that had in the past or could in the future generate a similar, if not higher, traffic volume than the proposed development. In addition, Hicks Road and Helen Road contain a number of manufacturing, industrial, and/or warehouse uses with eight buildings having direct access to Helen Road. As such, the impact of the subject warehouse/distribution development on Helen Road will be similar, if not, less than (1) the existing uses that previously occupied the subject site, (2) a number of uses that are permitted on the subject site under the current zoning, and (3) the other similar type of uses located along Hicks Road and Helen Road.

Traffic Impact Study
Proposed Warehouse/Distribution Development

Palatine, Illinois

Prepared For:

MIDWEST INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

June 30, 2020

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed warehouse/distribution development to be located in Palatine, Illinois. The site, which is currently occupied by Weber-Stephen Products, is located on the west side of Hicks Road at Sellstrom Drive. As proposed, the site will be developed with two warehouse/distribution buildings that will include an approximate 275,558 square-foot building and an approximate 153,043 square-foot building for a total of 428,601 square feet of space. Access to the development will be provided via two access drives on Sellstrom Drive.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development.

Figure 1 shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following conditions:

1. Existing Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. No-Build Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes increased by an ambient area growth factor not attributable to any particular development and the traffic to be generated by the Amazon Last Mile distribution facility to be located immediately east of the site on the east side of Hicks Road at Sellstrom Drive.

3. Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the background traffic volumes and the net increase in traffic estimated to be generated by the proposed development.

Site Location **Figure 1**

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E.

Aerial View of Site **Figure 2**

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E.

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

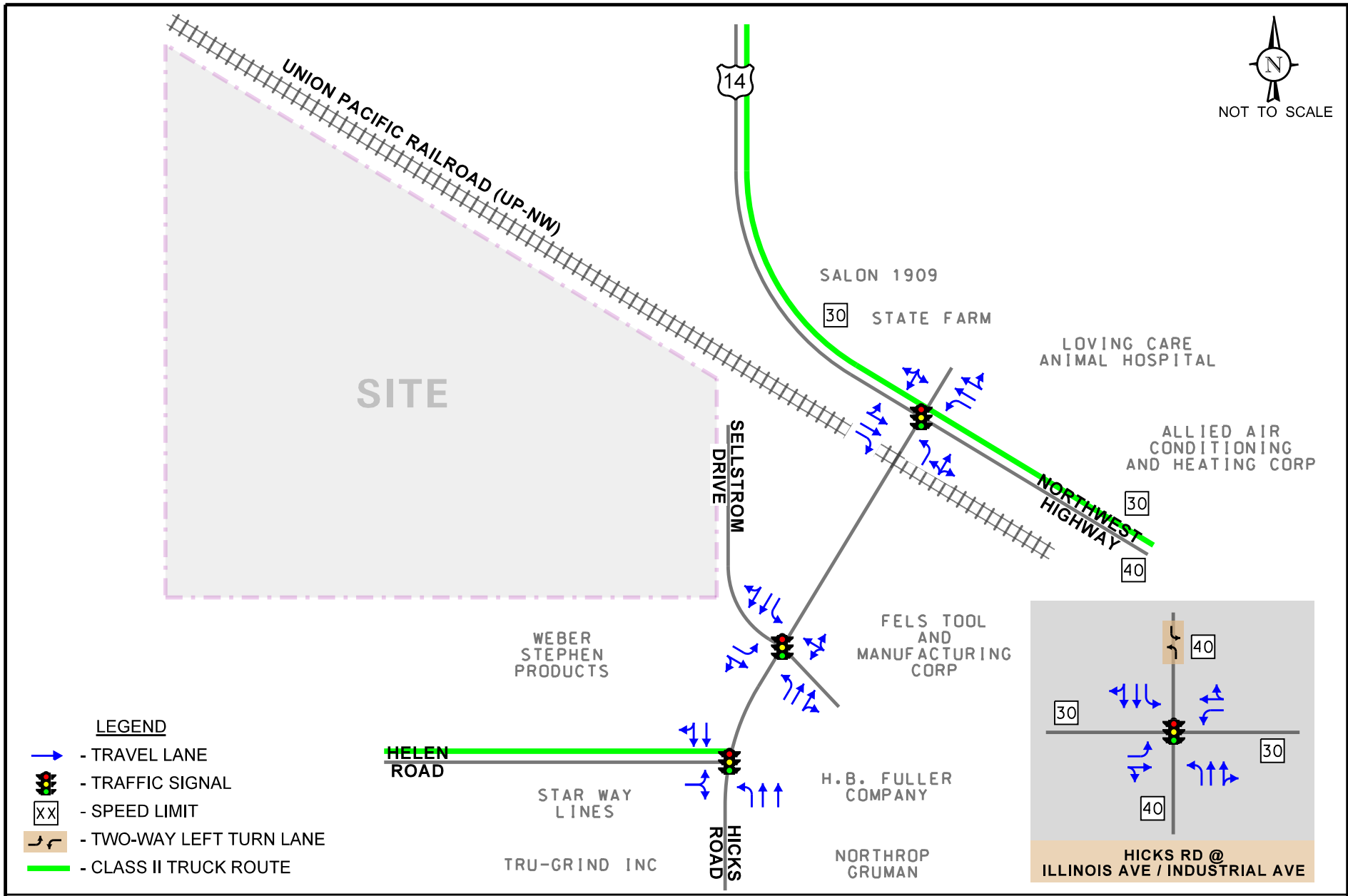
The site, which is currently occupied by Weber-Stephen Products, is located on the west side of Hicks Road at Sellstrom Drive. Land uses in the vicinity of the site are primarily residential to the north and industrial to the east, west, and south and include Star Way Lines, Inc. to the south and Weber-Stephen Products to the east and south. It should be noted that the Amazon Last Mile distribution facility is proposed to be located on the east side of Hicks Road at Sellstrom Drive.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Northwest Highway (U.S. Route 14) is a northwest-southeast, minor arterial roadway that provides two lanes in each direction. At its signalized intersection with Hicks Road, Northwest Highway provides a combined through/left-turn lane, a through lane, and an exclusive right-turn lane on the southeast-bound approach and an exclusive left-turn lane, a through lane, and a combined through/right-turn lane on the northwest-bound approach. Northwest Highway is under the jurisdiction of the Illinois Department of Transportation (IDOT) and is designated as a Class II Truck Route. Within the vicinity of the site, Northwest Highway has a posted speed limit of 30 miles per hour and is not designated as a Strategic Regional Arterial. Northwest Highway carries an AADT volume of 25,200 vehicles west of Hicks Road and 19,000 vehicles east of Hicks Road (IDOT 2017).

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1



Proposed Warehouse Development
Palatine, Illinois

Existing Roadway Characteristics

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 20-126

Figure: 3

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Hicks Road is a north-south, major collector roadway that in the vicinity of the site provides two through lanes in each direction. South of Helen Road, Hicks Road is generally divided by a two-way left-turn lane. At its signalized intersection with Northwest Highway, Hicks Road provides an exclusive left-turn lane and a combined left-turn/through/right-turn lane on the northbound approach. The north leg of this intersection is an access drive that serves the commercial uses on the north side of Northwest Highway and provides a combined left-turn/through/right-turn lane. At its signalized intersection with Sellstrom Drive, Hicks Road provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on both approaches. Approximately 75 feet south of Northwest Highway, Hicks Road has an at-grade crossing with Union Pacific Railroad tracks which carry the UP-NW Metra Commuter rail line. The northbound stop bar on Hicks Road at its intersection with Northwest Highway is located south of this crossing to prevent vehicles from stopping on the tracks. At its signalized intersection with Illinois Avenue and Industrial Avenue, Hicks Road provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on both approaches. Hicks Road is under the jurisdiction of IDOT, carries an AADT volume of 11,500 vehicles (IDOT 2018), and has a posted speed limit of 35 miles per hour north of Helen Road and 40 miles per hour south of Helen Road.

Industrial Avenue is an east-west, major collector roadway that provides one through lane in each direction. At its signalized intersection with Hicks Road, where it forms the east leg of this intersection, Industrial Avenue provides an exclusive left-turn lane and a combined through/right-turn lane on the westbound approach and is aligned opposite Illinois Avenue. Industrial Avenue is under the jurisdiction of the Village of Rolling Meadows, carries an AADT volume of 5,600 vehicles (IDOT 2018), and has a posted speed limit of 30 miles per hour.

Illinois Avenue is an east-west local roadway that provides one through lane in each direction. At its signalized intersection with Hicks Road, where it forms the west leg of this intersection, Illinois Avenue provides an exclusive left-turn lane and a combined through/right-turn lane on the eastbound approach and is aligned opposite Industrial Avenue. Illinois Avenue is under the jurisdiction of the Village of Palatine, has a posted speed limit of 30 miles per hour, and is designated as a Class II Truck Route from Vermont Street to Hicks Road.

Helen Road is an east-west local roadway that extends from Hicks Road to its terminus approximately one mile to the west. At its signalized intersection with Hicks Road, Helen Road provides an exclusive left-turn lane and an exclusive right-turn lane. Helen Road is under the jurisdiction of the Village of Palatine, has a posted speed limit of 25 miles per hour, and is designated as a Class III Truck Route from Oak Street to Hicks Road.

Sellstrom Drive is a north-south local roadway that extends from Hicks Road to its terminus approximately 500 feet to the north. At its signalized intersection with Hicks Road, Sellstrom Drive provides an exclusive left-turn lane and a combined through/right-turn lane. The east leg of this intersection serves the Amazon Last Mile Distribution Facility and the H.B. Fuller/Fel's site and provides a combined left-turn/through/right-turn lane at its intersection with Sellstrom Drive. Sellstrom Drive is under the jurisdiction of the Village of Palatine.

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Traffic Signal Interconnect

The intersection of Hicks Road with Northwest Highway is part of a 17-signal interconnect system that extends along Northwest Highway from Baldwin Road 2.5 miles south and then east to Wilke Road. The intersections of Hicks Road with Sellstrom Drive, Helen Road, the Northrop Grumman entrance, and Illinois Avenue/Industrial Avenue are part of a separate interconnect system.

Existing Traffic Volumes

In order to determine current traffic conditions within the study area, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units at the following intersections:

- Hicks Road with Northwest Highway
- Hicks Road with Sellstrom Drive
- Hicks Road with Industrial Avenue/Illinois Avenue

The traffic counts were conducted on Wednesday, April 3, 2019 during the weekday morning (6:00 A.M. to 9:00 A.M.) and weekday evening (3:00 P.M. to 6:30 P.M.) peak periods. The results of the traffic counts show that the peak hours of traffic generally occur between 7:15 A.M. and 8:15 A.M. during the morning peak period and between 4:30 P.M. and 5:30 P.M. during the evening peak period. Copies of the traffic count summary sheets are included in the Appendix. **Figure 4** illustrates the existing peak hour vehicle traffic volumes.

Train Operations

The at-grade train crossing of the UP-NW Metra Rail Line with Hicks Road was observed during the peak periods to determine how often passing trains obstructed traffic movements. It was observed that the at-grade crossing was blocked nine times during the weekday morning peak hour for an average of 61 seconds. Further, it was observed that the at-grade crossing was blocked five times during the weekday evening peak hour for an average of 65 seconds.

Given the proximity of the railroad crossing to the traffic signal at the intersection of Northwest Highway and Hicks Road, the crossing and signal are interconnected. During a train event, a preemptive northbound phase is provided in order to clear any cars that may be stopped on the railroad tracks followed by an eastbound-westbound through green phase on Northwest Highway during which the eastbound right turns and westbound left turns are prohibited.

Crash Analysis

KLOA, Inc. obtained accident data for the most recent available past five years (2013 to 2017) for the intersections of Hicks Road with Northwest Highway, Sellstrom Drive, and Illinois Avenue/Industrial Avenue. A review of the crash data revealed no fatalities were reported at any of the studied intersections during the review period. A summary of the crash data for the intersections is shown in **Tables 1 t**hrough **3.**[1]

[1] **IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. The author is responsible for any data analyses and conclusions drawn.**

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Table 1
HICKS ROAD WITH NORTHWEST HIGHWAY - CRASH SUMMARY

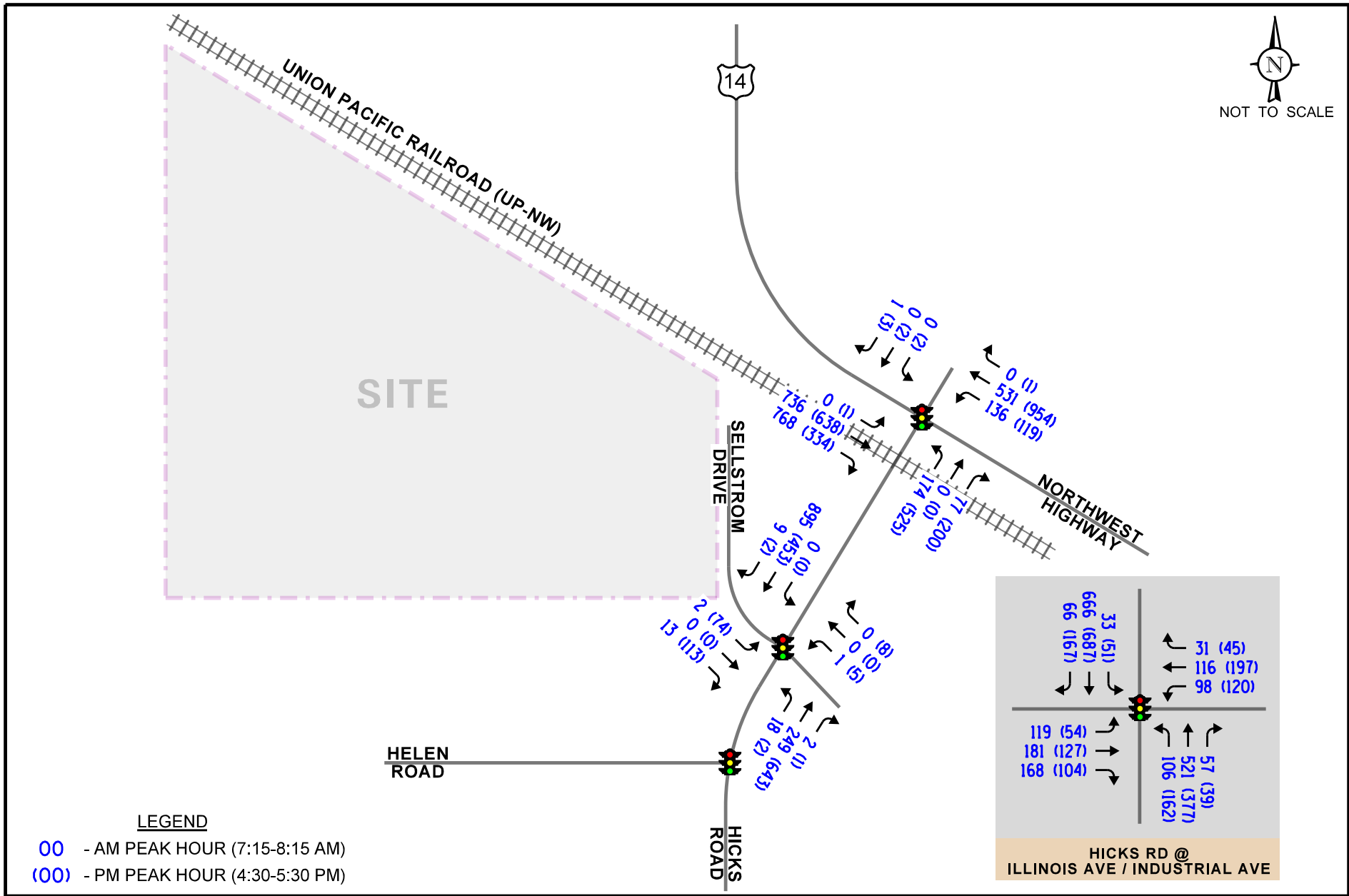
	Type of Accident Frequency						
Year	**Angle**	**Object**	**Rear End**	**Sideswipe**	**Turning**	**Other**	**Total**
2013	0	0	4	0	1	0	5
2014	0	0	2	1	2	0	5
2015	0	0	5	2	3	0	10
2016	0	0	5	0	1	0	6
2017	0	0	2	0	2	0	4
Total	**0**	**0**	**18**	**3**	**9**	**0**	**30**
Average/Year	**--**	**--**	**3.6**	**<1.0**	**1.8**	**--**	**6.0**

Table 2
HICKS ROAD WITH SELLSTROM DRIVE/ACCESS ROAD - CRASH SUMMARY

	Type of Accident Frequency						
Year	**Angle**	**Object**	**Rear End**	**Sideswipe**	**Turning**	**Other**	**Total**
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	1	1	0	0	0	2
2017	0	0	1	0	0	0	1
Total	**0**	**1**	**2**	**0**	**0**	**0**	**3**
Average/Year	**--**	**<1.0**	**<1.0**	**--**	**--**	**--**	**<1.0**

Table 3
HICKS ROAD WITH ILLINOIS AVENUE/INDUSTRIAL AVENUE - CRASH SUMMARY

	Type of Accident Frequency						
Year	**Angle**	**Object**	**Rear End**	**Sideswipe**	**Turning**	**Other**	**Total**
2013	1	0	0	0	2	0	3
2014	4	0	2	1	0	0	7
2015	0	1	4	0	0	1	6
2016	1	0	2	0	1	0	4
2017	2	0	3	0	0	0	5
Total	**8**	**1**	**11**	**1**	**3**	**1**	**25**
Average/Year	**1.6**	**<1.0**	**2.2**	**<1.0**	**<1.0**	**<1.0**	**5.0**



Proposed Warehouse Development
Palatine, Illinois

Existing Traffic Volumes

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Job No: 20-126

Figure: 4

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

As proposed, the site will be developed with two warehouse/distribution buildings as summarized below:

- An approximate 275,558 square-foot building that will have approximately 291 parking spaces and 42 exterior docks.

- An approximate 153,043 square-foot building that will have approximately 188 parking spaces and 28 exterior docks.

Overall, both warehouse buildings will provide of a total of 428,601 square feet of space including 8,572 square feet of office, 479 parking spaces, and 70 exterior docks.

Access to the site will be provided via the following two access drives on Sellstrom Drive:

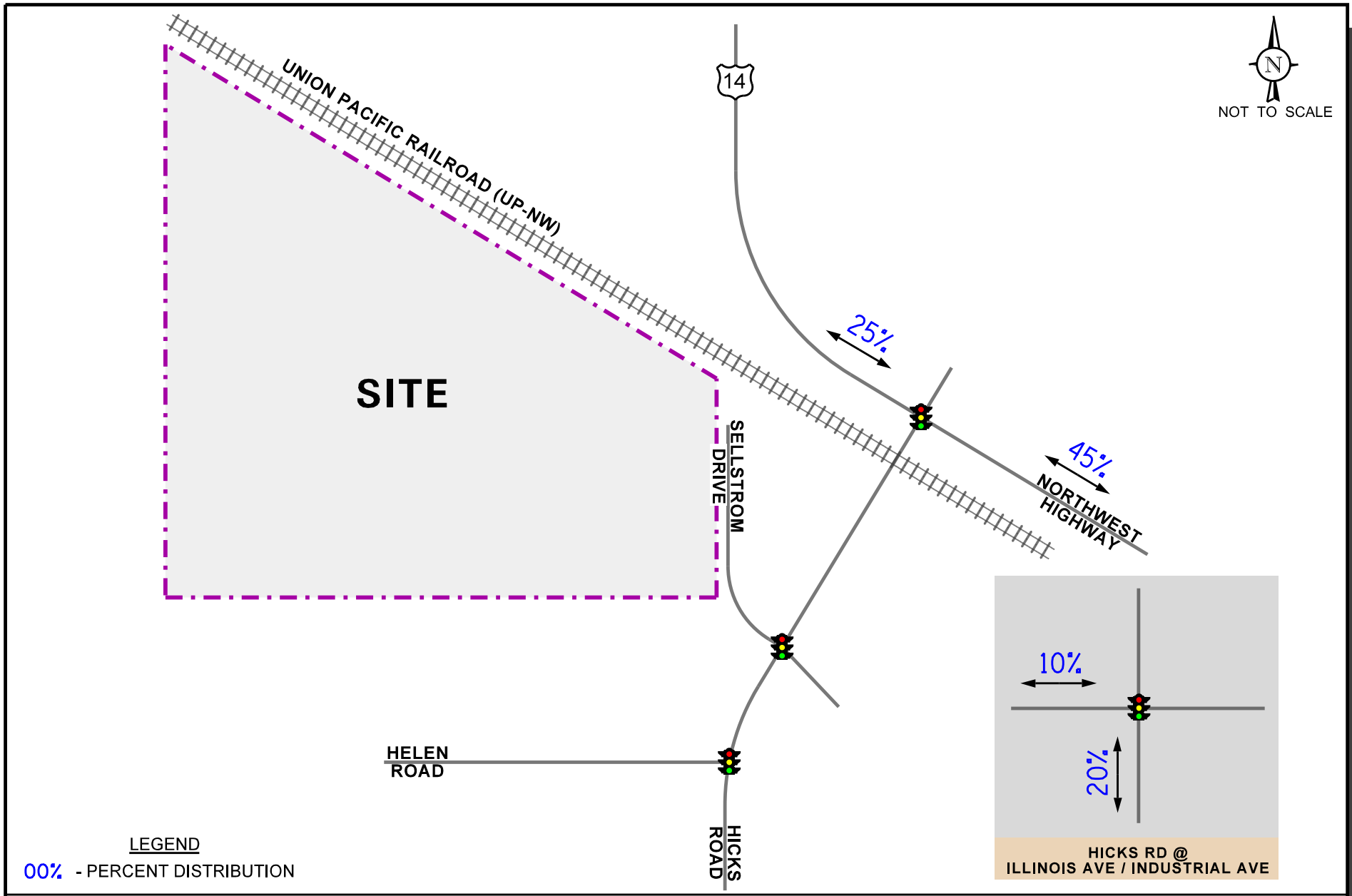
- The southern access drive will be located on the west side of Sellstrom Drive at the south end of the site and will serve both passenger vehicle and truck traffic. This access drive will provide one inbound lane and one outbound lane with the outbound lane under stop sign control. It should be noted that the access drive will be located just north of an existing access road. However, given the lower volume of traffic on Sellstrom Drive, currently using the existing access road, and projected to use the proposed access drive, the proximity of the access drive to the access road should not pose any operational issues.

- The northern access drive will be located on the west side of Sellstrom Drive at the north end of the site and at the terminus of Sellstrom Drive and will primarily serve passenger vehicle traffic. This access drive will provide one inbound lane and one outbound lane.

A copy of the preliminary site plan is included in the Appendix.

Directional Distribution

The directions from which traffic generated by the proposed warehouse/distribution development will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of the development-generated traffic.



Proposed Warehouse Development
Palatine, Illinois

Estimated Directional Distribution

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Figure: 5

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

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Peak Hour Traffic Volumes

The estimates of traffic to be generated by the development are based upon the proposed land use type and size using data published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. Land-Use Code 150 (Warehouse) was utilized for the proposed west building of approximately 275,558 square feet in size and the east building of approximately 153,043 square feet in size, totaling 428,601 square feet of space including office and maintenance areas. It should be noted that the site will provide a total of 479 car parking spaces and 70 exterior docks.

Table 4 shows the vehicle trips estimated to be generated by the proposed development during the weekday morning and weekday evening peak hours in addition to the weekday daily volumes. The ITE trip generation summary sheets are included in the Appendix.

Table 1
PROJECTED SITE-GENERATED TRAFFIC VOLUMES

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Weekday Daily
		In	Out	Total	In	Out	Total	
150	Warehouse (428,601 s.f.)	59	18	77	21	58	79	722

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated weekday morning and weekday evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution. **Figure 6** illustrates the assignment of the development-generated traffic volumes.

Background (No-Build) Traffic Conditions

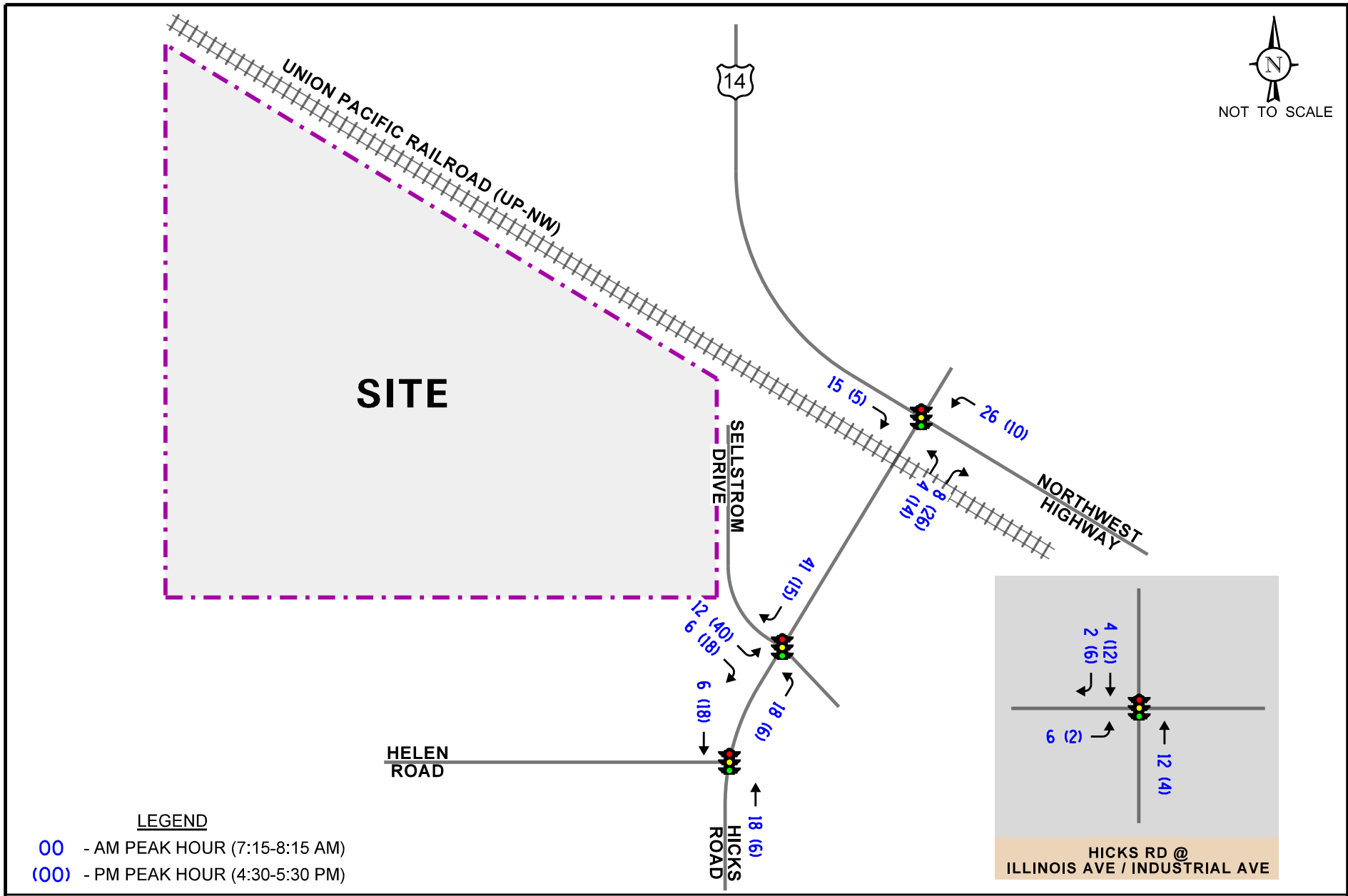
The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on AADT projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate of 0.51 percent per year for six years (buildout year plus five years) for a total of 3.1 percent. A copy of the CMAP 2050 projections letter is included in the Appendix. In addition, the traffic to be generated by the Amazon Last Mile Distribution Facility to be located immediately east of the site on the east side of Hicks Road at Sellstrom Drive was included in the background traffic conditions based on the traffic study conducted for the Amazon Last Mile Distribution Facility.

The Year 2025 no-build traffic volumes are illustrated in **Figure 7**.

Total Projected Traffic Volumes

The development-generated traffic (Figure 6) was added to the Year 2025 no-build traffic volumes to determine the Year 2025 total projected traffic volumes, as shown in **Figure 8**.

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1



Proposed Warehouse Development
Palatine, Illinois

Estimated Site-Generated Traffic Volumes

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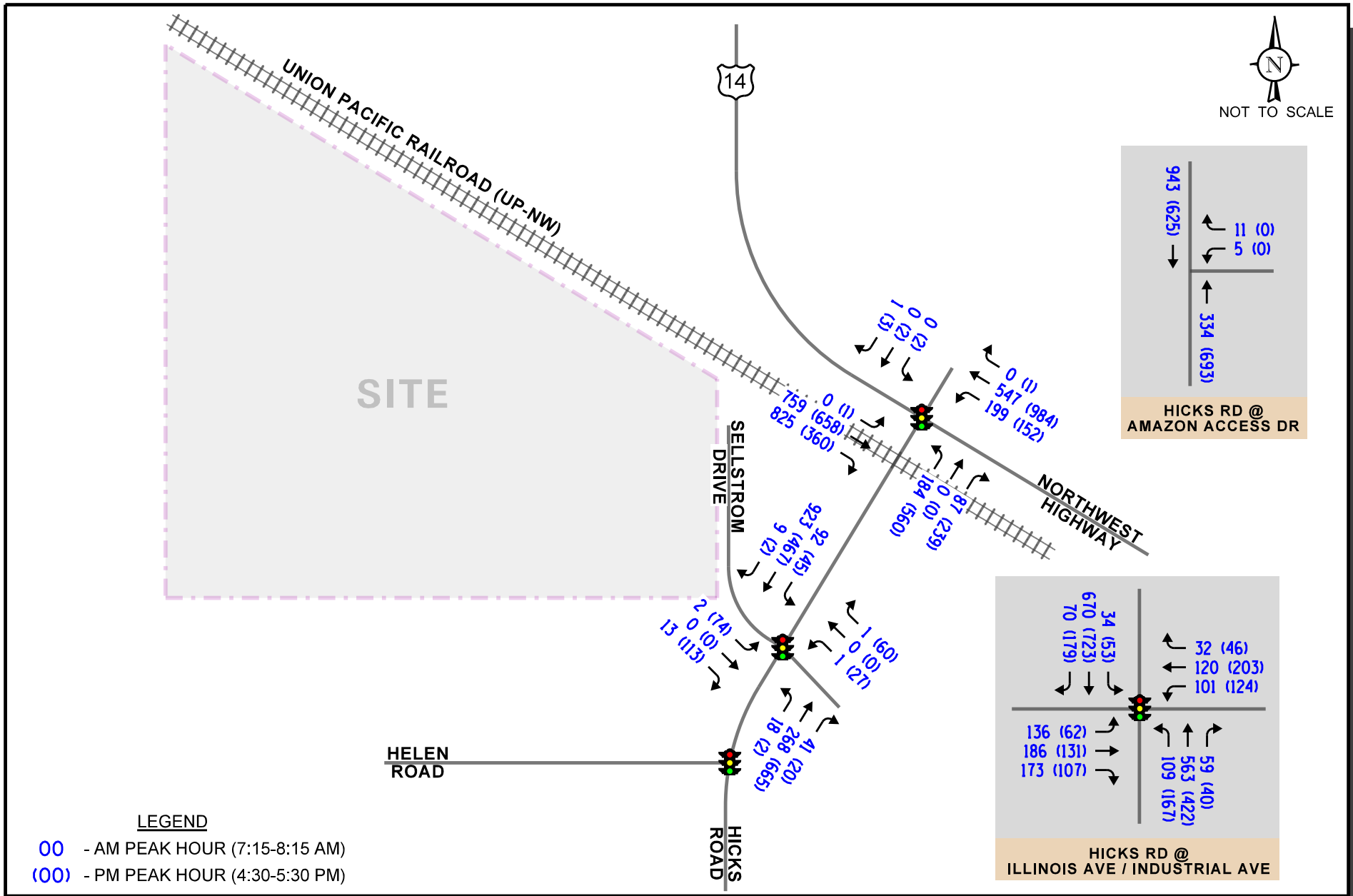
Figure: 6

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1



Proposed Warehouse Development
Palatine, Illinois

Year 2025 No-Build Traffic Volumes

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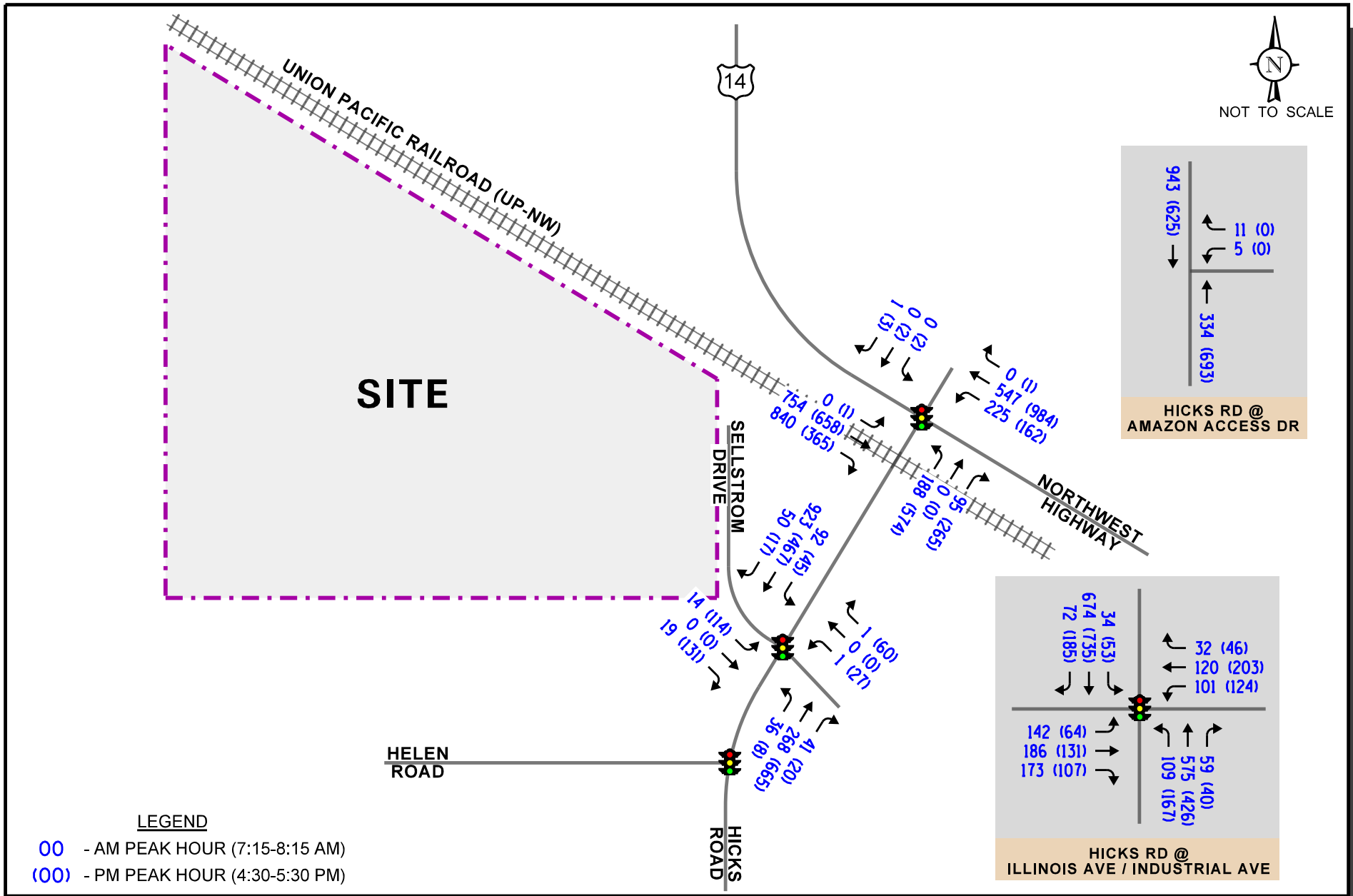
Figure: 7

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1



Proposed Warehouse Development
Palatine, Illinois

Year 2025 Total Projected Traffic Volumes

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Job No: 20-126

Figure: 8

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing (Year 2019), Year 2025 no-build, and Year 2025 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 6th Edition* and analyzed using the Synchro/SimTraffic 10 software. The analysis for the traffic-signal controlled intersections were accomplished using field measured cycle lengths and phasings to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2025 no-build, and Year 2025 total projected conditions are presented in **Tables 5** through **8**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
CAPACITY ANALYSIS RESULTS – HICKS ROAD WITH NORTHWEST HIGHWAY – SIGNALIZED

	Peak Hour	Eastbound		Westbound		Northbound		Southbound	Overall
		L/T	R	L	T/R	L	L/T/R	L/T/R	
Year 2019 Existing Traffic Volumes	Weekday Morning Peak Hour	C 21.8	A 7.2	B 12.6	B 12.4	D 42.7	D 42.4	E 58.0	B 16.8
		B – 14.3		B – 12.4		D – 42.6			
	Weekday Evening Peak Hour	C 24.8	A 3.4	B 14.7	B 17.8	E 56.2	E 57.6	E 56.7	C 27.9
		B – 17.5		B – 17.5		E – 56.9			
Year 2025 No-build Traffic Volumes	Weekday Morning Peak Hour	C 25.0	B 10.4	B 17.2	B 13.2	D 42.9	D 42.7	E 58.0	B 19.1
		B – 17.4		B – 14.2		D – 42.8			
	Weekday Evening Peak Hour	C 28.9	A 4.0	B 17.7	C 20.3	D 53.8	E 56.3	E 56.7	C 29.5
		C – 20.1		B – 19.9		E – 55.0			
Year 2025 Projected Traffic Volumes	Weekday Morning Peak Hour	C 26.2	B 11.5	B 19.2	B 13.3	D 42.3	D 42.0	E 58.0	C 20.0
		B – 18.5		B – 15.1		D – 42.2			
	Weekday Evening Peak Hour	C 31.3	A 4.2	B 19.5	C 21.9	D 51.5	D 53.7	E 56.7	C 30.3
		C – 21.6		C – 21.5		D – 52.6			

Letter denotes Level of Service L – Left Turns R – Right Turns
Delay is measured in seconds. T – Through

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E.

Table 6
CAPACITY ANALYSIS RESULTS – HICKS DRIVE WITH SELLSTROM DRIVE/ACCESS ROAD – SIGNALIZED

	Peak Hour	Eastbound		Westbound	Northbound		Southbound		Overall
		L	T/R	L/T/R	L	T/R	L	T/R	
Year 2019 Existing Traffic Volumes	Weekday Morning Peak Hour	C 31.5	C 35.0	C 32.0	A 1.6	A 1.3	--	A 3.1	A 3.2
		C – 34.6			A – 1.4		A – 3.1		
	Weekday Evening Peak Hour	D 39.2	D 46.2	C 30.3	A 2.5	A 4.5	--	A 5.9	B 10.8
		D – 43.4			A – 4.5		A – 5.9		
Year 2025 No-build Traffic Volumes	Weekday Morning Peak Hour	C 31.5	C 35.0	C 32.0	A 1.4	A 3.6	A 1.3	A 3.2	A 3.5
		C – 34.6			A – 3.4		A – 3.0		
	Weekday Evening Peak Hour	D 41.9	D 48.4	D 44.3	A 2.0	A 7.3	A 3.6	A 5.8	B 13.8
		D – 45.8			A – 7.3		A – 5.6		
Year 2025 Projected Traffic Volumes	Weekday Morning Peak Hour	C 32.7	D 35.7	C 31.5	A 2.5	A 5.9	A 2.4	A 6.7	A 6.8
		C – 34.4			A – 5.5		A – 6.3		
	Weekday Evening Peak Hour	E 58.2	D 53.5	D 47.5	A 2.1	A 7.4	A 3.7	A 6.0	B 16.7
		E – 55.7			A – 7.3		A – 5.8		

Letter denotes Level of Service L – Left Turns R – Right Turns
Delay is measured in seconds. T – Through

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E.

Table 7
CAPACITY ANALYSIS RESULTS – HICKS ROAD WITH ILLINOIS AVENUE AND INDUSTRIAL AVENUE - SIGNALIZED

	Peak Hour	Eastbound		Westbound		Northbound		Southbound		Overall
		L	T/R	L	T/R	L	T/R	L	T/R	
Year 2019 Existing Traffic Volumes	Weekday Morning Peak Hour	B 16.5	D 46.1	B 18.3	C 26.5	B 13.8	B 19.6	A 7.0	C 22.5	C 24.6
		D – 38.6		C – 23.2		B – 18.7		C – 21.8		
	Weekday Evening Peak Hour	B 15.6	D 36.3	B 18.9	C 34.9	C 26.1	B 18.9	B 10.7	C 34.5	C 29.1
		C – 32.3		C – 29.6		C – 20.9		C – 33.2		
Year 2025 No-build Traffic Volumes	Weekday Morning Peak Hour	B 16.9	D 44.6	B 18.5	C 27.9	B 14.3	B 20.5	A 7.0	C 23.0	C 24.8
		D – 37.0		C – 23.9		B – 19.6		C – 22.3		
	Weekday Evening Peak Hour	B 15.8	D 37.2	B 19.1	D 35.9	C 26.4	C 20.4	B 10.7	D 40.2	C 31.9
		C – 32.8		C – 30.3		C – 22.1		D – 38.6		
Year 2025 Projected Traffic Volumes	Weekday Morning Peak Hour	B 17.1	D 44.4	B 18.0	C 27.9	B 14.3	C 20.7	A 5.9	C 21.7	C 24.4
		D – 36.7		C – 24.0		B – 19.7		C – 21.0		
	Weekday Evening Peak Hour	B 15.9	D 37.2	B 19.1	D 36.1	C 26.4	C 20.5	B 10.7	D 42.0	C 32.7
		C – 32.7		C – 30.4		C – 22.1		D – 40.3		

Letter denotes Level of Service L – Left Turns R – Right Turns
Delay is measured in seconds. T – Through

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E.

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Hicks Road with Northwest Highway

The results of the capacity analysis indicate that overall this intersection currently operates at Level of Service (LOS) B during the weekday morning peak hour and at LOS C during the weekday evening peak hour. Furthermore, the eastbound and westbound approaches currently operate at LOS B during both peak hours. However, the northbound approach operates at LOS D during the weekday morning peak hour and at LOS E during the weekday evening peak hour and the southbound approach operates at LOS E during both peak hours. The reduced level of service is due primarily to the long cycle length of 130 seconds, the split phase operation of the northbound and southbound approaches, and the allocation of the majority of the green time to Northwest Highway.

Under Year 2025 no-build conditions, this intersection is projected to continue operating at the same level of service during the weekday morning and weekday evening peak hours with increases in delay of approximately two seconds for both peak hours. The eastbound approach is projected to operate at LOS B during the weekday morning peak hour and LOS C during the weekday evening peak hour with increases in delay of approximately three seconds during both peak hours. All other approaches are projected to continue to operate at the same levels of service with increases in delay of approximately two seconds or less during both peak hours.

Under Year 2025 total projected conditions, this intersection will operate at LOS C during the weekday morning and evening peak hours with increases in delay of approximately one second over no-build conditions. Furthermore, all approaches are projected to continue to operate at a similar level of service during both peak hours with an increase in delay of approximately two seconds or less compared to no-build conditions. It should be noted that while a large percentage of the traffic generated by the proposed development will access the site by making a westbound left turn at this intersection, the westbound left-turn movement will continue to operate at the same level of service.

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Under existing conditions, the northbound approach currently experiences 95th percentile queues of approximately 180 feet during the weekday morning peak hour and approximately 465 feet during the weekday evening peak hour. This confirms field observations conducted by KLOA, Inc. which found that northbound queues at this intersection extended to the intersection of Hicks Road with Sellstrom Drive zero times during the morning peak hour and ten times during the evening peak hour. It should be noted that six of the ten times, northbound traffic extended to the intersection of Hicks Road and Sellstrom Drive between 4:30 P.M. and 4:45 P.M which can be partially attributed to the high volume of Weber-Stephens Products exiting traffic. It should be noted that while these queues do extend to the location of Sellstrom Drive during the evening peak hour, vehicles do not typically block the intersection, allowing vehicles to turn onto Hicks Road. These queues currently clear the intersection of Hicks Road and Sellstrom Drive within one cycle and the intersection of Hicks Road with Northwest Highway within two cycles and are projected to continue to do so.

In addition to the queueing caused by typical traffic patterns, the northbound approach is impacted when the UP-NW at-grade crossing is blocked by a commuter train. As previously indicated, the gates at the railroad crossing are down nine times during the weekday morning peak hour and four times during the weekday evening peak hour. However, given that the gates are down for an average of approximately one minute, northbound traffic is typically able to clear the Northwest Highway intersection within one green cycle during the weekday morning peak hour and one to two cycles during the weekday evening peak hour.

Hicks Road with Sellstrom Drive and the Access Road

The results of the capacity analysis indicate that overall this intersection currently operates at LOS A during the weekday morning peak hour and at LOS B during the weekday evening peak hour. Furthermore, the northbound and southbound approaches currently operate at LOS A during both peak hours and the westbound approach operates at LOS C during both peak hours. The eastbound approach currently operates at LOS C during the weekday morning peak hour and at LOS D during the weekday evening peak hour. As previously mentioned, northbound queues from the intersection of Hicks Road with Northwest Highway extend to and past this intersection during the evening peak hour. However, these queues typically clear the intersection within one cycle and vehicles are typically able to exit even when the northbound queue extends to or past this intersection, as queuing vehicles do not block the intersection.

Under Year 2025 no-build conditions, this intersection is projected to continue operating at the same levels of service during the weekday morning and weekday evening peak hours with increases in delay of approximately one second during the weekday morning peak hour and three seconds during the weekday evening peak hour. The westbound approach is projected to operate at LOS C during the weekday morning peak hour and LOS D during the weekday evening peak hour with increases in delay of less than one second and approximately 14 seconds during the weekday morning and weekday evening peak hours, respectively. The increase in delay is primarily due to the increase in traffic associated with the Amazon Last Mile Distribution Facility. All other approaches are projected to continue to operate at the same levels of service during both peak hours.

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Under Year 2025 total projected conditions, this intersection is projected to continue operating at the same levels of service during the weekday morning and weekday evening peak hours with increases in delay of three seconds over no-build conditions. The eastbound approach will operate at LOS C during the weekday morning peak hour and LOS E during the weekday evening peak hour with increases in delay of less than one second during the weekday morning peak hour and approximately ten seconds during the weekday evening peak hour. All other approaches will continue to operate at the same acceptable levels of service with increases in delay of approximately three seconds during both peak hours over no-build conditions. In addition, the 95th percentile queues for the northbound left-turn movement are projected to be approximately 57 feet during the weekday morning peak hour (two to three vehicles in length) and 21 feet during the weekday evening peak hour (one vehicle in length) and, as such, will be accommodated by the existing northbound left-turn lane. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements and/or traffic control modifications are required.

Hicks Road with Illinois Avenue and Industrial Avenue

The results of the capacity analysis indicate that the intersection currently operates at LOS C during the weekday morning and evening peak hours. Further, all of the approaches operate at LOS D or better. Under Year 2025 no-build and total conditions, the intersection is projected to continue to operate at the same level of service during both peak hours with increases in delay of less than four seconds. In addition, all of the approaches are projected to continue to operate at LOS D or better. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements and/or traffic control modifications are required.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- Access to the site will be provided via the following two access drives on Sellstrom Drive and its signalized intersection with Hicks Road:
  - The southern access drive will be located on the west side of Sellstrom Drive at the south end of the site and will serve both passenger vehicle and truck traffic. This access drive will provide one inbound lane and one outbound lane with the outbound lane under stop sign control. It should be noted that the access drive will be located just north of an existing access road. However, given the lower volume of traffic on Sellstrom Drive, currently using the existing access road, and projected to use the proposed access drive, the proximity of the access drive to the access road should not pose any operational issues.
  - The northern access drive will be located on the west side of Sellstrom Drive at the north end of the site and at the terminus of Sellstrom Drive and will primarily serve passenger vehicle traffic. This access drive will provide one inbound lane and one outbound lane.
- The two access drives will provide the development with efficient and orderly access with limited impact on Sellstrom Drive.
- The results of the capacity analyses have shown that the existing roadway system has sufficient reserve capacity to accommodate the development-generated traffic and that no roadway improvements and/or traffic control modifications are required.

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Appendix

Traffic Count Summary Sheets
Preliminary Site Plan
ITE Trip Generation Worksheets
CMAP 2050 Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets

Traffic Count Summary Sheets

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: S Hicks Rd with E Illinois Ave
Site Code:
Start Date: 04/03/2019

Turning Movement Data

Start Time	E Illinois Ave Eastbound						Industrial Ave Westbound						S Hicks Rd Northbound						S Hicks Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
6:00 AM	0	3	3	17	0	23	0	4	7	2	0	13	0	20	44	16	0	80	0	3	70	5	0	78	194
6:15 AM	0	11	15	19	0	45	0	6	9	1	0	16	0	25	88	10	0	123	0	4	89	9	0	102	286
6:30 AM	0	23	25	33	0	81	0	14	15	2	0	31	0	27	86	13	0	126	0	6	108	12	0	126	364
6:45 AM	0	19	50	32	0	101	0	4	21	7	0	32	0	41	120	20	0	181	0	12	90	15	0	117	431
Hourly Total	0	56	93	101	0	250	0	28	52	12	0	92	0	113	338	59	0	510	0	25	357	41	0	423	1275
7:00 AM	0	25	39	40	0	104	0	19	16	6	0	41	0	31	117	19	0	167	0	5	145	23	0	173	485
7:15 AM	0	29	40	58	0	127	0	26	23	5	0	54	0	22	153	13	0	188	0	6	143	14	2	163	532
7:30 AM	0	29	44	38	0	111	0	25	31	11	0	67	0	31	127	17	0	175	0	12	183	11	0	206	559
7:45 AM	0	37	56	30	0	123	0	22	32	4	0	58	0	33	124	19	0	176	0	7	166	18	0	191	548
Hourly Total	0	120	179	166	0	465	0	92	102	26	0	220	0	117	521	68	0	706	0	30	637	66	2	733	2124
8:00 AM	0	24	41	42	0	107	0	25	30	11	0	66	0	20	117	8	0	145	0	8	174	23	0	205	523
8:15 AM	0	24	25	50	0	99	0	18	28	6	0	52	0	33	97	13	0	143	0	14	147	21	0	182	476
8:30 AM	0	15	31	47	0	93	0	14	33	4	0	51	0	31	84	11	0	126	0	9	166	16	0	191	461
8:45 AM	0	16	20	47	1	83	0	18	24	8	0	50	0	40	92	8	0	140	0	7	131	20	0	158	431
Hourly Total	0	79	117	186	1	382	0	75	115	29	0	219	0	124	390	40	0	554	0	38	618	80	0	736	1891
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	21	34	45	0	100	0	20	24	6	0	50	0	37	61	13	0	111	0	7	153	18	0	178	439
3:15 PM	0	15	26	44	0	85	0	13	27	3	0	43	0	39	85	5	0	129	0	8	96	21	0	125	382
3:30 PM	0	18	17	38	1	73	0	23	32	9	0	64	0	32	69	10	0	111	0	7	170	26	1	203	451
3:45 PM	0	12	29	28	0	69	0	12	42	4	0	58	0	41	87	11	0	139	0	8	148	24	0	180	446
Hourly Total	0	66	106	155	1	327	0	68	125	22	0	215	0	149	302	39	0	490	0	30	567	89	1	686	1718
4:00 PM	0	16	32	47	0	95	0	16	54	13	0	83	0	53	87	10	0	150	0	12	158	28	0	198	526
4:15 PM	0	10	27	30	0	67	0	19	45	5	0	69	0	44	84	14	0	142	0	7	132	35	0	174	452
4:30 PM	0	11	35	24	0	70	0	38	61	10	0	109	0	32	95	12	0	139	0	13	246	53	0	312	630
4:45 PM	0	16	25	22	0	63	0	23	37	10	0	70	0	42	92	15	0	149	0	12	131	32	0	175	457
Hourly Total	0	53	119	123	0	295	0	96	197	38	0	331	0	171	358	51	0	580	0	44	667	148	0	859	2065
5:00 PM	0	18	25	34	0	77	0	36	48	12	0	96	0	48	107	5	0	160	0	9	163	42	0	214	547
5:15 PM	0	9	42	24	0	75	0	23	51	13	0	87	0	40	83	7	0	130	0	17	147	40	0	204	496
5:30 PM	0	26	27	31	0	84	0	24	67	5	0	96	0	39	92	11	0	142	0	6	148	42	0	196	518
5:45 PM	0	16	34	37	0	87	0	35	67	1	0	103	0	44	98	16	2	158	0	7	121	25	0	153	501
Hourly Total	0	69	128	126	0	323	0	118	233	31	0	382	0	171	380	39	2	590	0	39	579	149	0	767	2062
Grand Total	0	443	742	857	2	2042	0	477	824	158	0	1459	0	845	2289	296	2	3430	0	206	3425	573	3	4204	11135
Approach %	0.0	21.7	36.3	42.0	-	-	0.0	32.7	56.5	10.8	-	-	0.0	24.6	66.7	8.6	-	-	0.0	4.9	81.5	13.6	-	-	-
Total %	0.0	4.0	6.7	7.7	-	18.3	0.0	4.3	7.4	1.4	-	13.1	0.0	7.6	20.6	2.7	-	30.8	0.0	1.9	30.8	5.1	-	37.8	-
Lights	0	410	711	787	-	1908	0	452	767	144	-	1363	0	783	2209	280	-	3272	0	190	3310	545	-	4045	10588
% Lights	-	92.6	95.8	91.8	-	93.4	-	94.8	93.1	91.1	-	93.4	-	92.7	96.5	94.6	-	95.4	-	92.2	96.6	95.1	-	96.2	95.1
Buses	0	5	15	11	-	31	0	2	26	5	-	33	0	16	12	3	-	31	0	10	18	4	-	32	127

% Buses	-	1.1	2.0	1.3	-	1.5	-	0.4	3.2	3.2	-	2.3	-	1.9	0.5	1.0	-	0.9	-	4.9	0.5	0.7	-	0.8	1.1
Single-Unit Trucks	0	16	11	29	-	56	0	17	17	6	-	40	0	13	42	10	-	65	0	4	65	13	-	82	243
% Single-Unit Trucks	-	3.6	1.5	3.4	-	2.7	-	3.6	2.1	3.8	-	2.7	-	1.5	1.8	3.4	-	1.9	-	1.9	1.9	2.3	-	2.0	2.2
Articulated Trucks	0	11	3	29	-	43	0	6	9	3	-	18	0	33	26	3	-	62	0	2	32	10	-	44	167
% Articulated Trucks	-	2.5	0.4	3.4	-	2.1	-	1.3	1.1	1.9	-	1.2	-	3.9	1.1	1.0	-	1.8	-	1.0	0.9	1.7	-	1.0	1.5
Bicycles on Road	0	1	2	1	-	4	0	0	5	0	-	5	0	0	0	0	-	0	0	0	0	1	-	1	10
% Bicycles on Road	-	0.2	0.3	0.1	-	0.2	-	0.0	0.6	0.0	-	0.3	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.2	-	0.0	0.1
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Count Name: S Hicks Rd with E Illinois Ave
Site Code:
Start Date: 04/03/2019

Turning Movement Peak Hour Data (7:15 AM)

Start Time	E Illinois Ave Eastbound						Industrial Ave Westbound						S Hicks Rd Northbound						S Hicks Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	29	40	58	0	127	0	26	23	5	0	54	0	22	153	13	0	188	0	6	143	14	2	163	532
7:30 AM	0	29	44	38	0	111	0	25	31	11	0	67	0	31	127	17	0	175	0	12	183	11	0	206	559
7:45 AM	0	37	56	30	0	123	0	22	32	4	0	58	0	33	124	19	0	176	0	7	166	18	0	191	548
8:00 AM	0	24	41	42	0	107	0	25	30	11	0	66	0	20	117	8	0	145	0	8	174	23	0	205	523
Total	0	119	181	168	0	468	0	98	116	31	0	245	0	106	521	57	0	684	0	33	666	66	2	765	2162
Approach %	0.0	25.4	38.7	35.9	-	-	0.0	40.0	47.3	12.7	-	-	0.0	15.5	76.2	8.3	-	-	0.0	4.3	87.1	8.6	-	-	-
Total %	0.0	5.5	8.4	7.8	-	21.6	0.0	4.5	5.4	1.4	-	11.3	0.0	4.9	24.1	2.6	-	31.6	0.0	1.5	30.8	3.1	-	35.4	-
PHF	0.000	0.804	0.808	0.724	-	0.921	0.000	0.942	0.906	0.705	-	0.914	0.000	0.803	0.851	0.750	-	0.910	0.000	0.688	0.910	0.717	-	0.928	0.967
Lights	0	108	175	149	-	432	0	88	104	24	-	216	0	99	499	55	-	653	0	30	647	65	-	742	2043
% Lights	-	90.8	96.7	88.7	-	92.3	-	89.8	89.7	77.4	-	88.2	-	93.4	95.8	96.5	-	95.5	-	90.9	97.1	98.5	-	97.0	94.5
Buses	0	0	2	3	-	5	0	1	5	2	-	8	0	1	1	0	-	2	0	2	2	1	-	5	20
% Buses	-	0.0	1.1	1.8	-	1.1	-	1.0	4.3	6.5	-	3.3	-	0.9	0.2	0.0	-	0.3	-	6.1	0.3	1.5	-	0.7	0.9
Single-Unit Trucks	0	4	2	10	-	16	0	8	5	3	-	16	0	2	13	0	-	15	0	1	9	0	-	10	57
% Single-Unit Trucks	-	3.4	1.1	6.0	-	3.4	-	8.2	4.3	9.7	-	6.5	-	1.9	2.5	0.0	-	2.2	-	3.0	1.4	0.0	-	1.3	2.6
Articulated Trucks	0	6	2	6	-	14	0	1	1	2	-	4	0	4	8	2	-	14	0	0	8	0	-	8	40
% Articulated Trucks	-	5.0	1.1	3.6	-	3.0	-	1.0	0.9	6.5	-	1.6	-	3.8	1.5	3.5	-	2.0	-	0.0	1.2	0.0	-	1.0	1.9
Bicycles on Road	0	1	0	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Bicycles on Road	-	0.8	0.0	0.0	-	0.2	-	0.0	0.9	0.0	-	0.4	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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Count Name: S Hicks Rd with E Illinois Ave
Site Code:
Start Date: 04/03/2019

Turning Movement Peak Hour Data (4:30 PM)

Start Time	E Illinois Ave Eastbound						Industrial Ave Westbound						S Hicks Rd Northbound						S Hicks Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	11	35	24	0	70	0	38	61	10	0	109	0	32	95	12	0	139	0	13	246	53	0	312	630
4:45 PM	0	16	25	22	0	63	0	23	37	10	0	70	0	42	92	15	0	149	0	12	131	32	0	175	457
5:00 PM	0	18	25	34	0	77	0	36	48	12	0	96	0	48	107	5	0	160	0	9	163	42	0	214	547
5:15 PM	0	9	42	24	0	75	0	23	51	13	0	87	0	40	83	7	0	130	0	17	147	40	0	204	496
Total	0	54	127	104	0	285	0	120	197	45	0	362	0	162	377	39	0	578	0	51	687	167	0	905	2130
Approach %	0.0	18.9	44.6	36.5	-	-	0.0	33.1	54.4	12.4	-	-	0.0	28.0	65.2	6.7	-	-	0.0	5.6	75.9	18.5	-	-	-
Total %	0.0	2.5	6.0	4.9	-	13.4	0.0	5.6	9.2	2.1	-	17.0	0.0	7.6	17.7	1.8	-	27.1	0.0	2.4	32.3	7.8	-	42.5	-
PHF	0.000	0.750	0.756	0.765	-	0.925	0.000	0.789	0.807	0.865	-	0.830	0.000	0.844	0.881	0.650	-	0.903	0.000	0.750	0.698	0.788	-	0.725	0.845
Lights	0	52	123	95	-	270	0	118	187	42	-	347	0	154	371	38	-	563	0	45	673	161	-	879	2059
% Lights	-	96.3	96.9	91.3	-	94.7	-	98.3	94.9	93.3	-	95.9	-	95.1	98.4	97.4	-	97.4	-	88.2	98.0	96.4	-	97.1	96.7
Buses	0	0	0	0	-	0	0	0	2	1	-	3	0	0	1	1	-	2	0	3	3	0	-	6	11
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	1.0	2.2	-	0.8	-	0.0	0.3	2.6	-	0.3	-	5.9	0.4	0.0	-	0.7	0.5
Single-Unit Trucks	0	2	3	5	-	10	0	1	4	2	-	7	0	2	2	0	-	4	0	2	9	3	-	14	35
% Single-Unit Trucks	-	3.7	2.4	4.8	-	3.5	-	0.8	2.0	4.4	-	1.9	-	1.2	0.5	0.0	-	0.7	-	3.9	1.3	1.8	-	1.5	1.6
Articulated Trucks	0	0	1	4	-	5	0	1	2	0	-	3	0	6	3	0	-	9	0	1	2	3	-	6	23
% Articulated Trucks	-	0.0	0.8	3.8	-	1.8	-	0.8	1.0	0.0	-	0.8	-	3.7	0.8	0.0	-	1.6	-	2.0	0.3	1.8	-	0.7	1.1
Bicycles on Road	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	1.0	0.0	-	0.6	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: S Hicks Rd with Sellstorm Dr
Site Code:
Start Date: 04/03/2019

Turning Movement Data

Start Time	Sellstorm Dr Eastbound						Sellstorm Dr Westbound						S Hicks Rd Northbound						S Hicks Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
6:00 AM	0	1	0	3	0	4	0	0	0	0	0	0	0	3	18	0	0	21	0	0	92	3	0	95	120
6:15 AM	0	2	0	2	0	4	0	0	0	0	0	0	0	0	19	0	0	19	0	0	126	2	0	128	151
6:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	2	30	0	0	32	1	1	136	3	0	141	174
6:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	4	39	0	0	43	0	1	181	2	0	184	228
Hourly Total	0	4	0	5	0	9	0	1	0	0	0	1	0	9	106	0	0	115	1	2	535	10	0	548	673
7:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	8	45	0	0	53	0	0	219	7	0	226	280
7:15 AM	0	0	0	2	0	2	0	0	0	0	0	0	0	4	81	0	0	85	0	0	178	3	0	181	268
7:30 AM	0	1	0	6	0	7	0	0	0	0	0	0	0	5	59	0	0	64	0	0	229	1	0	230	301
7:45 AM	0	1	0	2	0	3	0	1	0	0	0	1	0	7	63	1	0	71	0	0	232	1	0	233	308
Hourly Total	0	2	0	11	0	13	0	1	0	0	0	1	0	24	248	1	0	273	0	0	858	12	0	870	1157
8:00 AM	0	0	0	3	1	3	0	0	0	0	0	0	0	2	46	1	0	49	0	0	255	4	0	259	311
8:15 AM	0	0	0	1	0	1	0	0	0	1	0	1	0	2	56	0	0	58	0	0	210	2	0	212	272
8:30 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	4	38	1	0	43	0	0	210	1	0	211	255
8:45 AM	0	2	0	1	0	3	0	1	0	0	0	1	0	1	63	0	0	64	0	1	186	3	0	190	258
Hourly Total	0	2	0	6	1	8	0	1	0	1	0	2	0	9	203	2	0	214	0	1	861	10	0	872	1096
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	3	0	9	0	12	0	2	0	0	0	2	0	3	90	0	0	93	1	0	114	5	0	120	227
3:15 PM	0	4	0	5	0	9	0	0	0	0	0	0	0	4	107	0	0	111	0	0	79	5	0	84	204
3:30 PM	0	11	0	10	0	21	0	0	1	2	0	3	0	5	137	1	0	143	0	0	106	2	0	108	275
3:45 PM	0	3	0	4	0	7	0	2	0	0	0	2	0	6	131	0	0	137	2	0	106	7	0	115	261
Hourly Total	0	21	0	28	0	49	0	4	1	2	0	7	0	18	465	1	0	484	3	0	405	19	0	427	967
4:00 PM	0	2	0	7	0	9	0	0	0	0	0	0	0	2	143	0	0	145	0	0	97	5	0	102	256
4:15 PM	0	3	0	5	0	8	0	1	0	0	0	1	0	2	116	1	0	119	0	1	111	6	0	118	246
4:30 PM	0	62	0	90	0	152	0	4	0	6	0	10	0	1	153	0	0	154	0	0	113	0	0	113	429
4:45 PM	0	7	0	11	0	18	0	1	0	1	0	2	0	1	145	0	0	146	0	0	100	1	0	101	267
Hourly Total	0	74	0	113	0	187	0	6	0	7	0	13	0	6	557	1	0	564	0	1	421	12	0	434	1198
5:00 PM	0	4	0	9	0	13	0	0	0	0	0	0	0	0	179	1	0	180	0	0	112	0	0	112	305
5:15 PM	0	1	0	3	0	4	0	0	0	1	0	1	0	0	157	0	0	157	0	0	128	1	0	129	291
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	159	0	0	159	0	0	115	0	0	115	274
5:45 PM	0	0	0	1	1	1	0	0	0	0	0	0	0	1	144	0	0	145	0	0	98	0	0	98	244
Hourly Total	0	5	0	13	1	18	0	0	0	1	0	1	0	1	639	1	0	641	0	0	453	1	0	454	1114
Grand Total	0	108	0	176	2	284	0	13	1	11	0	25	0	67	2218	6	0	2291	4	4	3533	64	0	3605	6205
Approach %	0.0	38.0	0.0	62.0	-	-	0.0	52.0	4.0	44.0	-	-	0.0	2.9	96.8	0.3	-	-	0.1	0.1	98.0	1.8	-	-	-
Total %	0.0	1.7	0.0	2.8	-	4.6	0.0	0.2	0.0	0.2	-	0.4	0.0	1.1	35.7	0.1	-	36.9	0.1	0.1	56.9	1.0	-	58.1	-
Lights	0	104	0	156	-	260	0	9	1	9	-	19	0	47	2140	1	-	2188	4	4	3447	55	-	3510	5977
% Lights	-	96.3	-	88.6	-	91.5	-	69.2	100.0	81.8	-	76.0	-	70.1	96.5	16.7	-	95.5	100.0	100.0	97.6	85.9	-	97.4	96.3
Buses	0	0	0	2	-	2	0	0	0	0	-	0	0	1	12	0	-	13	0	0	16	1	-	17	32

% Buses	-	0.0	-	1.1	-	0.7	-	0.0	0.0	0.0	-	0.0	-	1.5	0.5	0.0	-	0.6	0.0	0.0	0.5	1.6	-	0.5	0.5
Single-Unit Trucks	0	3	0	9	-	12	0	3	0	1	-	4	0	7	47	4	-	58	0	0	45	5	-	50	124
% Single-Unit Trucks	-	2.8	-	5.1	-	4.2	-	23.1	0.0	9.1	-	16.0	-	10.4	2.1	66.7	-	2.5	0.0	0.0	1.3	7.8	-	1.4	2.0
Articulated Trucks	0	1	0	9	-	10	0	1	0	1	-	2	0	12	17	1	-	30	0	0	23	3	-	26	68
% Articulated Trucks	-	0.9	-	5.1	-	3.5	-	7.7	0.0	9.1	-	8.0	-	17.9	0.8	16.7	-	1.3	0.0	0.0	0.7	4.7	-	0.7	1.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	0	0	2	0	-	2	4
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.1	0.0	-	0.1	0.0	0.0	0.1	0.0	-	0.1	0.1
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: S Hicks Rd with Sellstorm Dr
Site Code:
Start Date: 04/03/2019

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Sellstorm Dr Eastbound						Sellstorm Dr Westbound						S Hicks Rd Northbound						S Hicks Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	0	0	2	0	2	0	0	0	0	0	0	0	4	81	0	0	85	0	0	178	3	0	181	268
7:30 AM	0	1	0	6	0	7	0	0	0	0	0	0	0	5	59	0	0	64	0	0	229	1	0	230	301
7:45 AM	0	1	0	2	0	3	0	1	0	0	0	1	0	7	63	1	0	71	0	0	232	1	0	233	308
8:00 AM	0	0	0	3	1	3	0	0	0	0	0	0	0	2	46	1	0	49	0	0	255	4	0	259	311
Total	0	2	0	13	1	15	0	1	0	0	0	1	0	18	249	2	0	269	0	0	894	9	0	903	1188
Approach %	0.0	13.3	0.0	86.7	-	-	0.0	100.0	0.0	0.0	-	-	0.0	6.7	92.6	0.7	-	-	0.0	0.0	99.0	1.0	-	-	-
Total %	0.0	0.2	0.0	1.1	-	1.3	0.0	0.1	0.0	0.0	-	0.1	0.0	1.5	21.0	0.2	-	22.6	0.0	0.0	75.3	0.8	-	76.0	-
PHF	0.000	0.500	0.000	0.542	-	0.536	0.000	0.250	0.000	0.000	-	0.250	0.000	0.643	0.769	0.500	-	0.791	0.000	0.000	0.876	0.563	-	0.872	0.955
Lights	0	2	0	5	-	7	0	0	0	0	-	0	0	15	225	0	-	240	0	0	880	6	-	886	1133
% Lights	-	100.0	-	38.5	-	46.7	-	0.0	-	-	-	0.0	-	83.3	90.4	0.0	-	89.2	-	-	98.4	66.7	-	98.1	95.4
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	3	0	-	3	4
% Buses	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.4	0.0	-	0.4	-	-	0.3	0.0	-	0.3	0.3
Single-Unit Trucks	0	0	0	3	-	3	0	1	0	0	-	1	0	1	15	2	-	18	0	0	7	2	-	9	31
% Single-Unit Trucks	-	0.0	-	23.1	-	20.0	-	100.0	-	-	-	100.0	-	5.6	6.0	100.0	-	6.7	-	-	0.8	22.2	-	1.0	2.6
Articulated Trucks	0	0	0	5	-	5	0	0	0	0	-	0	0	2	8	0	-	10	0	0	4	1	-	5	20
% Articulated Trucks	-	0.0	-	38.5	-	33.3	-	0.0	-	-	-	0.0	-	11.1	3.2	0.0	-	3.7	-	-	0.4	11.1	-	0.6	1.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: S Hicks Rd with Sellstorm Dr
Site Code:
Start Date: 04/03/2019

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Sellstorm Dr Eastbound						Sellstorm Dr Westbound						S Hicks Rd Northbound						S Hicks Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	62	0	90	0	152	0	4	0	6	0	10	0	1	153	0	0	154	0	0	113	0	0	113	429
4:45 PM	0	7	0	11	0	18	0	1	0	1	0	2	0	1	145	0	0	146	0	0	100	1	0	101	267
5:00 PM	0	4	0	9	0	13	0	0	0	0	0	0	0	0	179	1	0	180	0	0	112	0	0	112	305
5:15 PM	0	1	0	3	0	4	0	0	0	1	0	1	0	0	157	0	0	157	0	0	128	1	0	129	291
Total	0	74	0	113	0	187	0	5	0	8	0	13	0	2	634	1	0	637	0	0	453	2	0	455	1292
Approach %	0.0	39.6	0.0	60.4	-	-	0.0	38.5	0.0	61.5	-	-	0.0	0.3	99.5	0.2	-	-	0.0	0.0	99.6	0.4	-	-	-
Total %	0.0	5.7	0.0	8.7	-	14.5	0.0	0.4	0.0	0.6	-	1.0	0.0	0.2	49.1	0.1	-	49.3	0.0	0.0	35.1	0.2	-	35.2	-
PHF	0.000	0.298	0.000	0.314	-	0.308	0.000	0.313	0.000	0.333	-	0.325	0.000	0.500	0.885	0.250	-	0.885	0.000	0.000	0.885	0.500	-	0.882	0.753
Lights	0	74	0	111	-	185	0	5	0	7	-	12	0	2	629	0	-	631	0	0	438	2	-	440	1268
% Lights	-	100.0	-	98.2	-	98.9	-	100.0	-	87.5	-	92.3	-	100.0	99.2	0.0	-	99.1	-	-	96.7	100.0	-	96.7	98.1
Buses	0	0	0	2	-	2	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	3
% Buses	-	0.0	-	1.8	-	1.1	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	-	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	4	0	-	4	0	0	7	0	-	7	11
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.6	0.0	-	0.6	-	-	1.5	0.0	-	1.5	0.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	1	-	1	0	0	7	0	-	7	9
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	12.5	-	7.7	-	0.0	0.0	100.0	-	0.2	-	-	1.5	0.0	-	1.5	0.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.2	0.0	-	0.2	-	-	0.0	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: US 14 with S Hicks Rd
Site Code:
Start Date: 04/03/2019

Turning Movement Data

Start Time	US 14 Eastbound						US 14 Westbound						S Hicks Rd Northbound						Parking Lot Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
6:00 AM	0	0	98	90	0	188	0	10	51	0	0	61	0	14	0	3	0	17	0	0	0	0	0	0	266
6:15 AM	0	0	127	113	0	240	0	13	66	0	0	79	0	17	0	6	0	23	0	0	0	0	0	0	342
6:30 AM	0	0	171	121	0	292	0	18	80	0	0	98	0	20	0	9	0	29	0	0	0	0	0	0	419
6:45 AM	0	0	169	150	0	319	0	33	94	0	0	127	0	29	0	9	0	38	0	0	0	0	0	0	484
Hourly Total	0	0	565	474	0	1039	0	74	291	0	0	365	0	80	0	27	0	107	0	0	0	0	0	0	1511
7:00 AM	0	0	169	190	0	359	0	36	98	0	0	134	0	26	0	16	0	42	0	0	0	0	1	0	535
7:15 AM	0	0	176	160	0	336	0	24	110	0	0	134	0	48	0	25	0	73	0	0	0	0	0	0	543
7:30 AM	0	0	229	196	0	425	0	33	132	0	0	165	0	43	0	21	0	64	0	0	0	0	0	0	654
7:45 AM	0	0	174	190	0	364	0	37	156	0	0	193	0	52	0	15	0	67	0	0	0	0	0	0	624
Hourly Total	0	0	748	736	0	1484	0	130	496	0	0	626	0	169	0	77	0	246	0	0	0	0	1	0	2356
8:00 AM	0	0	157	222	0	379	0	42	133	0	0	175	0	30	0	16	0	46	0	0	0	1	0	1	601
8:15 AM	0	1	171	171	0	343	0	34	144	1	0	179	0	37	0	7	0	44	0	0	0	0	0	0	566
8:30 AM	0	0	178	195	0	373	0	21	154	2	0	177	0	38	0	5	0	43	0	0	0	0	0	0	593
8:45 AM	0	3	206	154	0	363	0	35	132	0	0	167	0	41	0	14	0	55	0	0	0	2	0	2	587
Hourly Total	0	4	712	742	0	1458	0	132	563	3	0	698	0	146	0	42	0	188	0	0	0	3	0	3	2347
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	0	147	91	0	238	0	20	203	0	0	223	0	63	0	21	0	84	0	0	0	0	0	0	545
3:15 PM	0	0	121	65	0	186	0	17	193	0	0	210	0	84	2	28	0	114	0	0	0	1	0	1	511
3:30 PM	0	0	130	90	0	220	0	24	250	0	0	274	1	99	0	47	0	147	0	0	1	1	0	2	643
3:45 PM	0	0	139	96	0	235	0	17	255	0	0	272	0	104	1	31	0	136	0	0	0	1	0	1	644
Hourly Total	0	0	537	342	0	879	0	78	901	0	0	979	1	350	3	127	0	481	0	0	1	3	0	4	2343
4:00 PM	0	0	157	72	0	229	0	28	247	0	0	275	0	106	0	32	0	138	0	0	1	2	0	3	645
4:15 PM	0	0	116	84	0	200	0	36	264	2	0	302	0	92	0	26	0	118	0	1	1	1	0	3	623
4:30 PM	0	1	162	95	0	258	0	22	237	1	0	260	0	162	0	62	0	224	0	1	1	2	0	4	746
4:45 PM	0	0	144	76	0	220	0	22	266	0	0	288	0	106	0	45	0	151	0	1	0	1	0	2	661
Hourly Total	0	1	579	327	0	907	0	108	1014	3	0	1125	0	466	0	165	0	631	0	3	3	6	0	12	2675
5:00 PM	0	0	140	61	0	201	0	37	252	0	0	289	0	120	0	47	0	167	0	0	1	0	0	1	658
5:15 PM	0	0	192	88	0	280	0	38	199	0	0	237	2	135	0	46	0	183	0	0	0	0	0	0	700
5:30 PM	0	0	128	90	0	218	0	24	250	0	0	274	0	117	0	36	0	153	0	2	0	1	0	3	648
5:45 PM	0	0	123	79	0	202	0	22	244	0	0	266	0	114	0	33	0	147	0	0	0	1	0	1	616
Hourly Total	0	0	583	318	0	901	0	121	945	0	0	1066	2	486	0	162	0	650	0	2	1	2	0	5	2622
Grand Total	0	5	3724	2939	0	6668	0	643	4210	6	0	4859	3	1697	3	600	0	2303	0	5	5	14	1	24	13854
Approach %	0.0	0.1	55.8	44.1	-	-	0.0	13.2	86.6	0.1	-	-	0.1	73.7	0.1	26.1	-	-	0.0	20.8	20.8	58.3	-	-	-
Total %	0.0	0.0	26.9	21.2	-	48.1	0.0	4.6	30.4	0.0	-	35.1	0.0	12.2	0.0	4.3	-	16.6	0.0	0.0	0.0	0.1	-	0.2	-
Lights	0	5	3597	2865	-	6467	0	621	4058	6	-	4685	3	1636	3	581	-	2223	0	5	5	14	-	24	13399
% Lights	-	100.0	96.6	97.5	-	97.0	-	96.6	96.4	100.0	-	96.4	100.0	96.4	100.0	96.8	-	96.5	-	100.0	100.0	100.0	-	100.0	96.7
Buses	0	0	24	18	-	42	0	1	19	0	-	20	0	10	0	2	-	12	0	0	0	0	-	0	74

% Buses	-	0.0	0.6	0.6	-	0.6	-	0.2	0.5	0.0	-	0.4	0.0	0.6	0.0	0.3	-	0.5	-	0.0	0.0	0.0	-	0.0	0.5
Single-Unit Trucks	0	0	60	43	-	103	0	7	88	0	-	95	0	36	0	12	-	48	0	0	0	0	-	0	246
% Single-Unit Trucks	-	0.0	1.6	1.5	-	1.5	-	1.1	2.1	0.0	-	2.0	0.0	2.1	0.0	2.0	-	2.1	-	0.0	0.0	0.0	-	0.0	1.8
Articulated Trucks	0	0	43	13	-	56	0	13	45	0	-	58	0	14	0	4	-	18	0	0	0	0	-	0	132
% Articulated Trucks	-	0.0	1.2	0.4	-	0.8	-	2.0	1.1	0.0	-	1.2	0.0	0.8	0.0	0.7	-	0.8	-	0.0	0.0	0.0	-	0.0	1.0
Bicycles on Road	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	1	-	2	0	0	0	0	-	0	3
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.2	0.0	0.0	-	0.0	0.0	0.1	0.0	0.2	-	0.1	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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Count Name: US 14 with S Hicks Rd
Site Code:
Start Date: 04/03/2019

Turning Movement Peak Hour Data (7:15 AM)

Start Time	US 14 Eastbound						US 14 Westbound						S Hicks Rd Northbound						Parking Lot Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	0	176	160	0	336	0	24	110	0	0	134	0	48	0	25	0	73	0	0	0	0	0	0	543
7:30 AM	0	0	229	196	0	425	0	33	132	0	0	165	0	43	0	21	0	64	0	0	0	0	0	0	654
7:45 AM	0	0	174	190	0	364	0	37	156	0	0	193	0	52	0	15	0	67	0	0	0	0	0	0	624
8:00 AM	0	0	157	222	0	379	0	42	133	0	0	175	0	30	0	16	0	46	0	0	0	1	0	1	601
Total	0	0	736	768	0	1504	0	136	531	0	0	667	0	173	0	77	0	250	0	0	0	1	0	1	2422
Approach %	0.0	0.0	48.9	51.1	-	-	0.0	20.4	79.6	0.0	-	-	0.0	69.2	0.0	30.8	-	-	0.0	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	30.4	31.7	-	62.1	0.0	5.6	21.9	0.0	-	27.5	0.0	7.1	0.0	3.2	-	10.3	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.000	0.803	0.865	-	0.885	0.000	0.810	0.851	0.000	-	0.864	0.000	0.832	0.000	0.770	-	0.856	0.000	0.000	0.000	0.250	-	0.250	0.926
Lights	0	0	713	757	-	1470	0	130	501	0	-	631	0	151	0	74	-	225	0	0	0	1	-	1	2327
% Lights	-	-	96.9	98.6	-	97.7	-	95.6	94.4	-	-	94.6	-	87.3	-	96.1	-	90.0	-	-	-	100.0	-	100.0	96.1
Buses	0	0	3	3	-	6	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	7
% Buses	-	-	0.4	0.4	-	0.4	-	0.0	0.0	-	-	0.0	-	0.6	-	0.0	-	0.4	-	-	-	0.0	-	0.0	0.3
Single-Unit Trucks	0	0	13	6	-	19	0	3	21	0	-	24	0	14	0	3	-	17	0	0	0	0	-	0	60
% Single-Unit Trucks	-	-	1.8	0.8	-	1.3	-	2.2	4.0	-	-	3.6	-	8.1	-	3.9	-	6.8	-	-	-	0.0	-	0.0	2.5
Articulated Trucks	0	0	7	2	-	9	0	3	9	0	-	12	0	7	0	0	-	7	0	0	0	0	-	0	28
% Articulated Trucks	-	-	1.0	0.3	-	0.6	-	2.2	1.7	-	-	1.8	-	4.0	-	0.0	-	2.8	-	-	-	0.0	-	0.0	1.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

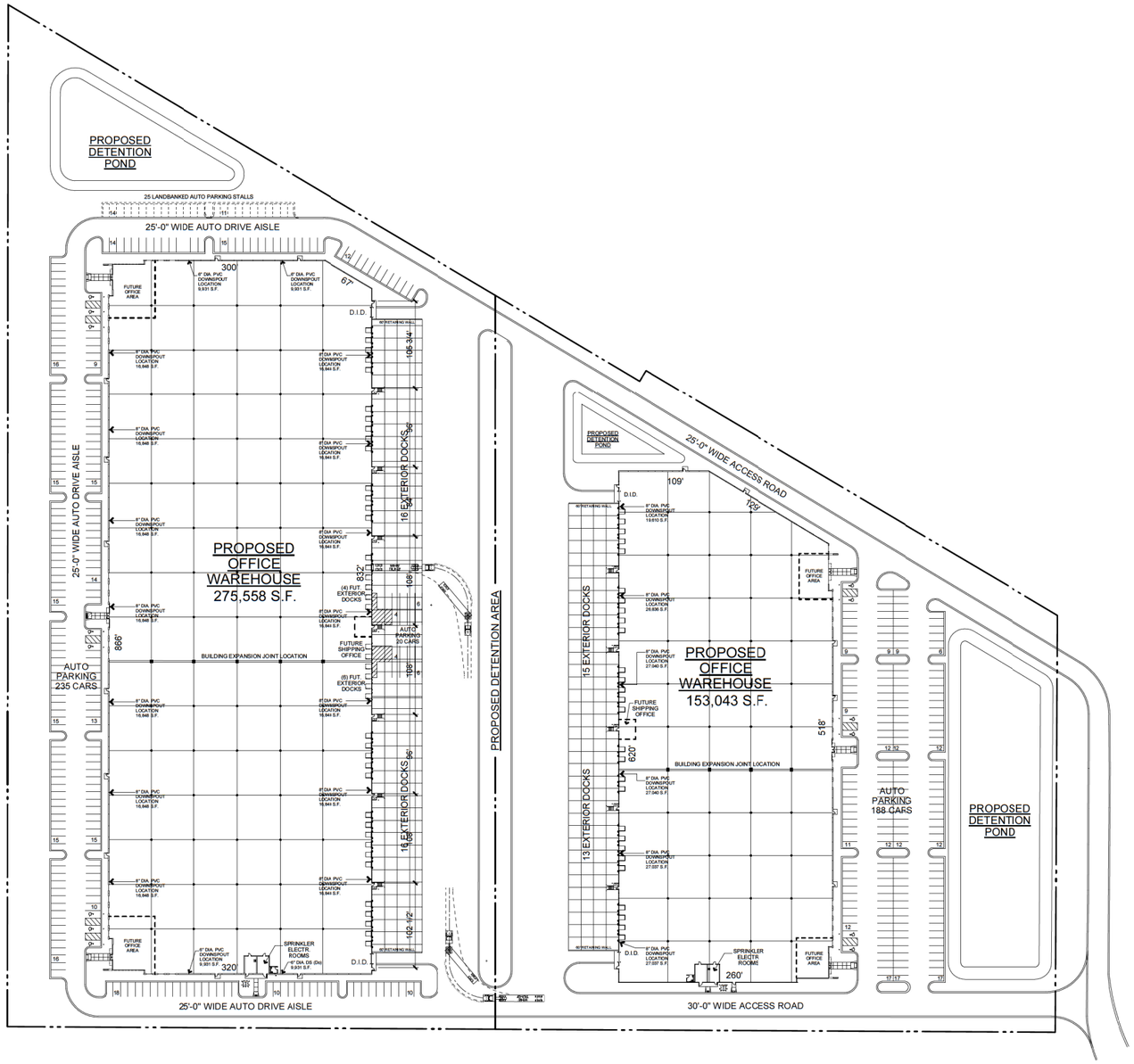
Count Name: US 14 with S Hicks Rd
Site Code:
Start Date: 04/03/2019

Turning Movement Peak Hour Data (4:30 PM)

Start Time	US 14 Eastbound						US 14 Westbound						S Hicks Rd Northbound						Parking Lot Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	1	162	95	0	258	0	22	237	1	0	260	0	162	0	62	0	224	0	1	1	2	0	4	746
4:45 PM	0	0	144	76	0	220	0	22	266	0	0	288	0	106	0	45	0	151	0	1	0	1	0	2	661
5:00 PM	0	0	140	61	0	201	0	37	252	0	0	289	0	120	0	47	0	167	0	0	1	0	0	1	658
5:15 PM	0	0	192	88	0	280	0	38	199	0	0	237	2	135	0	46	0	183	0	0	0	0	0	0	700
Total	0	1	638	320	0	959	0	119	954	1	0	1074	2	523	0	200	0	725	0	2	2	3	0	7	2765
Approach %	0.0	0.1	66.5	33.4	-	-	0.0	11.1	88.8	0.1	-	-	0.3	72.1	0.0	27.6	-	-	0.0	28.6	28.6	42.9	-	-	-
Total %	0.0	0.0	23.1	11.6	-	34.7	0.0	4.3	34.5	0.0	-	38.8	0.1	18.9	0.0	7.2	-	26.2	0.0	0.1	0.1	0.1	-	0.3	-
PHF	0.000	0.250	0.831	0.842	-	0.856	0.000	0.783	0.897	0.250	-	0.929	0.250	0.807	0.000	0.806	-	0.809	0.000	0.500	0.500	0.375	-	0.438	0.927
Lights	0	1	619	307	-	927	0	117	940	1	-	1058	2	521	0	195	-	718	0	2	2	3	-	7	2710
% Lights	-	100.0	97.0	95.9	-	96.7	-	98.3	98.5	100.0	-	98.5	100.0	99.6	-	97.5	-	99.0	-	100.0	100.0	100.0	-	100.0	98.0
Buses	0	0	3	2	-	5	0	0	0	0	-	0	0	1	0	1	-	2	0	0	0	0	-	0	7
% Buses	-	0.0	0.5	0.6	-	0.5	-	0.0	0.0	0.0	-	0.0	0.0	0.2	-	0.5	-	0.3	-	0.0	0.0	0.0	-	0.0	0.3
Single-Unit Trucks	0	0	7	8	-	15	0	0	9	0	-	9	0	1	0	2	-	3	0	0	0	0	-	0	27
% Single-Unit Trucks	-	0.0	1.1	2.5	-	1.6	-	0.0	0.9	0.0	-	0.8	0.0	0.2	-	1.0	-	0.4	-	0.0	0.0	0.0	-	0.0	1.0
Articulated Trucks	0	0	9	3	-	12	0	2	5	0	-	7	0	0	0	1	-	1	0	0	0	0	-	0	20
% Articulated Trucks	-	0.0	1.4	0.9	-	1.3	-	1.7	0.5	0.0	-	0.7	0.0	0.0	-	0.5	-	0.1	-	0.0	0.0	0.0	-	0.0	0.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.5	-	0.1	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Preliminary Site Plan

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1



BUILDING YARD AND PAVEMENT SETBACK REQUIREMENTS

ZONING - 'M' LIGHT MANUFACTURING

LIGHT MANUFACTURING YARD SETBACK REQUIREMENTS	
FRONT YARD BUILDING SETBACK	30'-0"
SIDE YARD BUILDING SETBACK	15'-0"
REAR YARD BUILDING SETBACK	15'-0"

LIGHT MANUFACTURING PAVEMENT SETBACK REQUIREMENTS	
FRONT YARD PAVEMENT SETBACK	5'-0"
SIDE YARD PAVEMENT SETBACK	2'-0"
REAR YARD PAVEMENT SETBACK	2'-0"

SITE DATA FOR EAST BUILDING

TOTAL SITE AREA (±25.39 AC.)	±1,105,841 S.F.
EAST SITE AREA (±10.96 AC.)	±477,212 S.F.
PROPOSED DETENTION	TO BE DETERMINED
BUILDING AREA	
PROPOSED OFFICE AREA (2.0%)	3,060 S.F.
PROPOSED WAREHOUSE AREA	149,983 S.F.
TOTAL BUILDING AREA	153,043 S.F.
EXTERIOR DOCKS	
EXTERIOR DOCKS PROVIDED	28 DOCKS
DRIVE IN OVERHEAD DOORS	2 DOORS
BUILDING HEIGHT	
GENERAL BUILDING HEIGHT AT PERIMETER	XX'-0" A.F.F.
GENERAL BUILDING HEIGHT AT OFFICE PARAPET	XX'-0" A.F.F.
BUILDING INTERIOR CLEAR HEIGHT	32'-0"
MAXIMUM FLOOR AREA RATIO (F.A.R.) ALLOWED	70%
FLOOR AREA RATIO (F.A.R.) PROVIDED	32.07%
CAR PARKING REQUIREMENTS	
OFFICE USE REQUIREMENTS	
1 SPACES FOR EACH 300 S.F. (ASSUME 3,060 S.F.)	11 STALLS
MANUFACTURING, WAREHOUSE AND STORAGE USE REQUIREMENTS	
1 SPACE PER 1,000 S.F. WAREHOUSE GROSS FLOOR AREA (ASSUME 149,983 S.F. REMAINING WAREHOUSE AREA)	150 STALLS
TOTAL CAR PARKING REQUIRED	161 STALLS
CAR PARKING PROVIDED (INCLUDES 6 HC STALLS)	188 STALLS

SITE DATA FOR WEST BUILDING

TOTAL SITE AREA (±25.39 AC.)	±1,105,841 S.F.
WEST SITE AREA (±14.43 AC.)	±628,629 S.F.
PROPOSED DETENTION	TO BE DETERMINED
BUILDING AREA	
PROPOSED OFFICE AREA (2.0%)	5,512 S.F.
PROPOSED WAREHOUSE AREA	270,046 S.F.
TOTAL BUILDING AREA	275,558 S.F.
EXTERIOR DOCKS	
EXTERIOR DOCKS PROVIDED	32 DOCKS
FUTURE DOCKS PROVIDED	10 DOCKS
TOTAL POTENTIAL EXTERIOR DOCKS	42 DOCKS
DRIVE IN OVERHEAD DOORS	2 DOORS
BUILDING HEIGHT	
BUILDING HEIGHT AT EAST DOCKS	XX'-X" A.F.F.
BUILDING HEIGHT AT NORTH/SOUTH OFFICE PERIMETER	XX'-0" A.F.F.
GENERAL BUILDING HEIGHT AT OFFICE PARAPET	XX'-X" A.F.F.
BUILDING INTERIOR CLEAR HEIGHT	36'-0"
MAXIMUM FLOOR AREA RATIO (F.A.R.) ALLOWED	70%
FLOOR AREA RATIO (F.A.R.) PROVIDED	43.94%
CAR PARKING REQUIREMENTS	
OFFICE USE REQUIREMENTS	
1 SPACES FOR EACH 300 S.F. (ASSUME 5,512 S.F.)	19 STALLS
MANUFACTURING, WAREHOUSE AND STORAGE USE REQUIREMENTS	
1 SPACE PER 1,000 S.F. WAREHOUSE GROSS FLOOR AREA (ASSUME 270,046 S.F. REMAINING WAREHOUSE AREA)	270 STALLS
TOTAL CAR PARKING REQUIRED	289 STALLS
CAR PARKING PROVIDED (INCLUDES 8 HC STALLS)	266 STALLS
LANDBANKED CAR SPACES PROVIDED	25 STALLS
TOTAL CAR PARKING PARKING	291 STALLS

PROJECT SITE PLAN

SCALE: 1" = 60'-0"

1 / A1.0

NORTH

GENERAL SITE NOTES:

1. SEE CIVIL ENGINEERING DRAWINGS FOR OTHER NOTES AND DETAILS.
2. ALL DIMENSIONS ARE FROM BACK OF CURB OR BUILDING UNLESS NOTED OTHERWISE.
3. SEE CIVL ENGINEERING DRAWINGS FOR EXTENT OF SITE DEMOLITION WORK.
4. EXACT LOCATION OR PLACEMENT OF NEW BLDG. INDICATED ABOVE SHALL BE DETERMINED BY LAND SURVEYOR HIRED BY G.C. AND SHALL COORDINATE & INFORM THE ARCHITECT OF ANY DISCREPANCY PRIOR TO STARTIG WORK.

MIDWEST INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

HARRIS ARCHITECTS INC.
4651 EMERSON AVENUE, PALATINE, ILLINOIS 60067-7416 847.303.1155
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PROPOSED OFFICE & WAREHOUSE BUILDINGS AT:
PALATINE CORPRATE CENTER
HICKS ROAD & NORTHWEST HIGHWAY PALATINE, ILLINOIS

06-08-2020 ISSUED FOR OWNER REVIEW
06-10-2020 ISSUED FOR OWNER REVIEW
06-15-2020 ISSUED FOR CIVIL PLAN
06-22-2020 ISSUED FOR ROOF DRAIN LOCATIONS

PROJECT NO. 220067
DRAWN BY: DJK
DATABASE: 220067PLAN.DB

SHEET NO. A1.0

2 c

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

ITE Trip Generation Worksheets

Warehousing
(150)

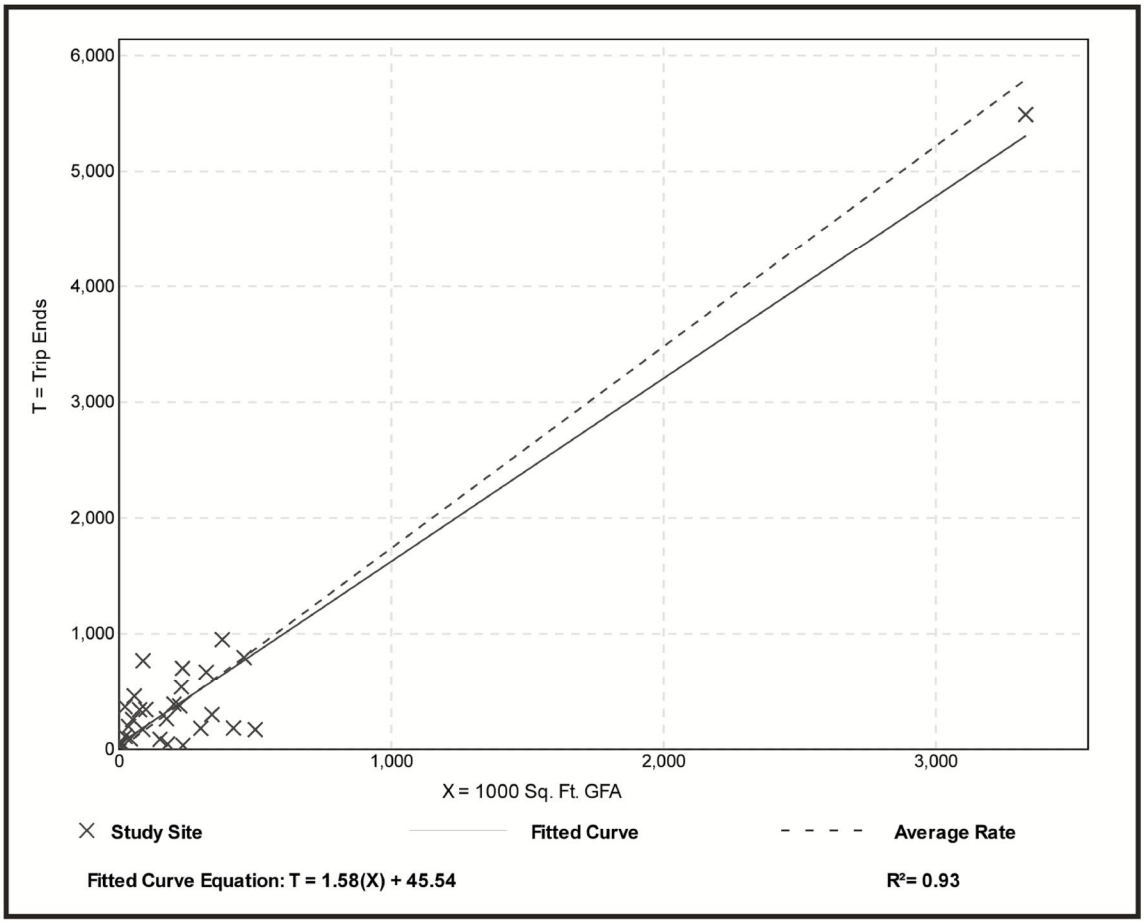
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 29
1000 Sq. Ft. GFA: 285
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.74	0.15 - 16.93	1.55

Data Plot and Equation



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

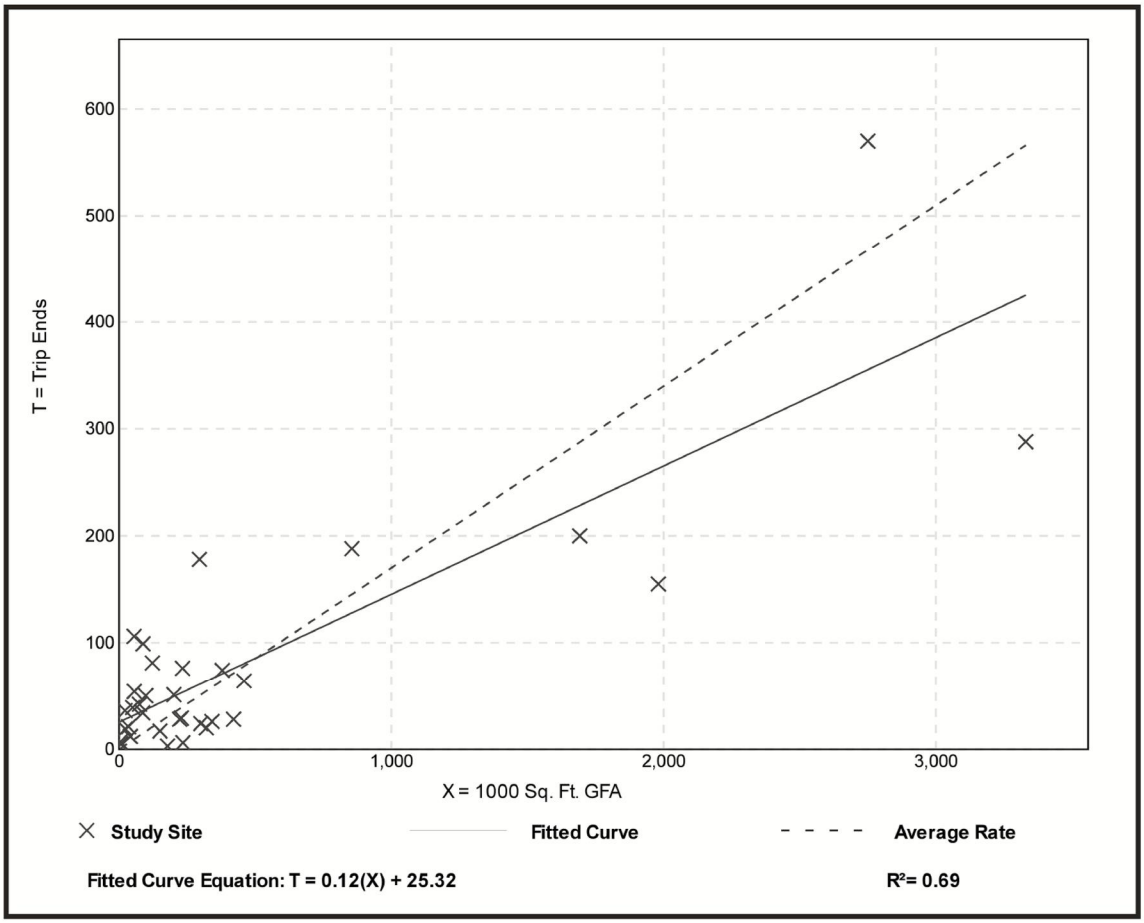
Warehousing
(150)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 34
1000 Sq. Ft. GFA: 451
Directional Distribution: 77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.02 - 1.93	0.20

Data Plot and Equation



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

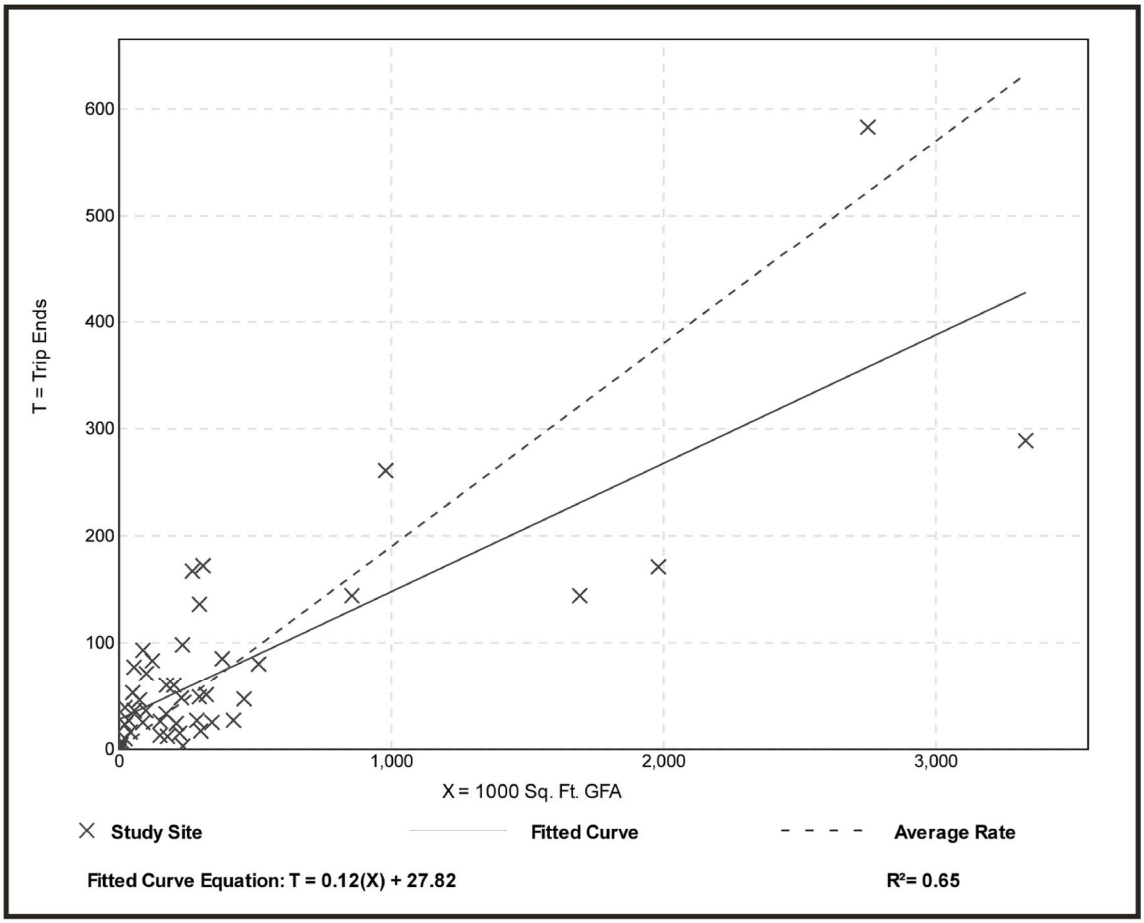
Warehousing
(150)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	47
1000 Sq. Ft. GFA:	400
Directional Distribution:	27% entering, 73% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.19	0.01 - 1.80	0.18

Data Plot and Equation



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Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

CMAP 2050 Projections Letter

Chicago Metropolitan Agency for Planning

233 South Wacker Drive
Suite 800
Chicago, Illinois 60606

312 454 0400
www.cmap.illinois.gov

May 7, 2019

Andrew Bowen
Consultant
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: ***US 14 - Hicks Road - Industrial Avenue***
IDOT

Dear Mr. Bowen:

In response to a request made on your behalf and dated May 6, 2019, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current Volumes	Year 2050 ADT
Industrial Ave, at Hicks Rd	5,600	6,600
Central Ave South of 63rd St	11,500	13,600
US 14 west of Hicks Rd	25,300	29,800
63rd St East of Central Ave	19,000	22,400

Traffic projections are developed using existing ADT data provided in the request letter and the results from the March 2019 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Quigley (IDOT)
S:\AdminGroups\ResearchAnalysis\2019_ForecastsTraffic\Palatine\ck-74-19\ck-74-19.docx

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Level of Service Criteria

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0

Unsignalized Intersections	
Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 2010.

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	736	768	136	531	0	174	0	77	0	0	1
Future Volume (vph)	0	736	768	136	531	0	174	0	77	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	160		0	0		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			120			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850					0.904			0.865	
Flt Protected				0.950			0.950	0.982				
Satd. Flow (prot)	0	3505	1599	1736	3406	0	1517	1494	0	0	1644	0
Flt Permitted				0.252			0.950	0.982				
Satd. Flow (perm)	0	3505	1599	460	3406	0	1517	1494	0	0	1644	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		358			1471			611			204	
Travel Time (s)		7.0			28.7			10.4			4.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	1%	4%	6%	0%	13%	0%	4%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							25%					
Lane Group Flow (vph)	0	791	826	146	571	0	140	130	0	0	1	0
Turn Type		NA	pm+ov	pm+pt	NA		Split	NA			NA	
Protected Phases		2	8	1	6		8	8			4	
Permitted Phases	2		2	6						4		
Detector Phase	2	2	8	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	8.0	3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	21.0	21.0	14.0	6.5	21.0		14.0	14.0		14.0	14.0	
Total Split (s)	58.5	58.5	32.5	23.4	81.9		32.5	32.5		15.6	15.6	
Total Split (%)	45.0%	45.0%	25.0%	18.0%	63.0%		25.0%	25.0%		12.0%	12.0%	
Yellow Time (s)	4.5	4.5	4.5	3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5	1.5	0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0	6.0	3.5	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Min	C-Min	None	None	C-Min		None	None		None	None	
Act Effct Green (s)		65.7	106.6	81.6	79.1		36.1	36.1			8.0	
Actuated g/C Ratio		0.51	0.82	0.63	0.61		0.28	0.28			0.06	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.45	0.63	0.38	0.28		0.33	0.31			0.01	
Control Delay		21.8	7.2	12.6	12.4		42.7	42.4			58.0	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay		21.8	7.2	12.6	12.4		42.7	42.4			58.0	
LOS		C	A	B	B		D	D			E	
Approach Delay		14.3			12.4			42.6			58.0	
Approach LOS		B			B			D			E	
Queue Length 50th (ft)		221	160	48	114		94	87			1	
Queue Length 95th (ft)		301	308	82	154		178	167			7	
Internal Link Dist (ft)		278			1391			531			124	
Turn Bay Length (ft)			200	160								
Base Capacity (vph)		1770	1314	483	2089		424	418			121	
Starvation Cap Reductn		0	0	0	0		0	0			0	
Spillback Cap Reductn		0	0	0	0		0	0			0	
Storage Cap Reductn		0	0	0	0		0	0			0	
Reduced v/c Ratio		0.45	0.63	0.30	0.27		0.33	0.31			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 22.5 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 16.8		Intersection LOS: B	
Intersection Capacity Utilization 83.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Hicks Road/Access Drice & US 14

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	13	1	0	0	18	249	2	0	895	9
Future Volume (vph)	2	0	13	1	0	0	18	249	2	0	895	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		0	70		0	45		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	80			25			60			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.850						0.999			0.999	
Flt Protected	0.950				0.950		0.950					
Satd. Flow (prot)	1805	1003	0	0	902	0	1543	3281	0	1900	3525	0
Flt Permitted							0.280					
Satd. Flow (perm)	1900	1003	0	0	950	0	455	3281	0	1900	3525	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		537			178			238			611	
Travel Time (s)		12.2			4.0			4.1			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	61%	100%	0%	0%	17%	10%	0%	0%	2%	33%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	14	0	0	1	0	19	261	0	0	941	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	18.0	18.0		18.0	18.0		13.0	49.0		13.0	49.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%		16.3%	61.3%		16.3%	61.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0			6.0		3.5	6.0		3.5	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	8.5	8.5			8.4		73.3	75.6			70.7	
Actuated g/C Ratio	0.11	0.11			0.10		0.92	0.94			0.88	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

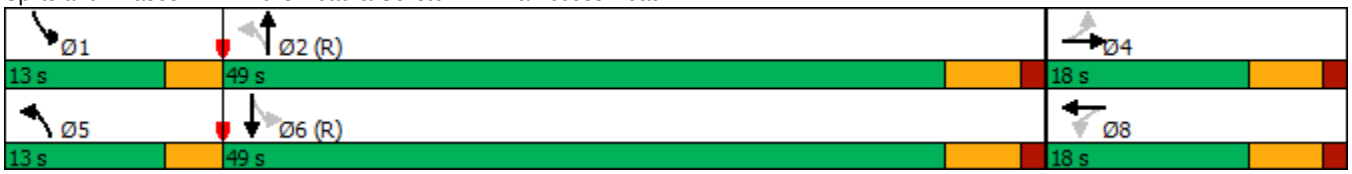
Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.01	0.13			0.01		0.04	0.08			0.30	
Control Delay	31.5	35.0			32.0		1.6	1.3			3.1	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay	31.5	35.0			32.0		1.6	1.3			3.1	
LOS	C	C			C		A	A			A	
Approach Delay		34.6			32.0			1.4			3.1	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	1	7			0		1	0			0	
Queue Length 95th (ft)	7	23			5		5	21			160	
Internal Link Dist (ft)		457			98			158			531	
Turn Bay Length (ft)	130						70					
Base Capacity (vph)	285	150			142		546	3101			3114	
Starvation Cap Reductn	0	0			0		0	0			0	
Spillback Cap Reductn	0	0			0		0	0			5	
Storage Cap Reductn	0	0			0		0	0			0	
Reduced v/c Ratio	0.01	0.09			0.01		0.03	0.08			0.30	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 3 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.30			
Intersection Signal Delay: 3.2		Intersection LOS: A	
Intersection Capacity Utilization 41.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Hicks Road & Sellstorm Drive/Access Road



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Hicks Road & Illinois Avenue/Industrial Avenue

05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	181	168	98	116	31	106	521	57	33	666	66
Future Volume (vph)	119	181	168	98	116	31	106	521	57	33	666	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	155		0	140		0	140		0	140		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	180			170			175			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		1.00	1.00							
Frt		0.928			0.968			0.985			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1638	0	1641	1627	0	1687	3422	0	1656	3462	0
Flt Permitted	0.653			0.272			0.234			0.403		
Satd. Flow (perm)	1138	1638	0	469	1627	0	416	3422	0	702	3462	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			16			15			13	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		939			1161			690			1966	
Travel Time (s)		18.3			22.6			10.5			29.8	
Confl. Peds. (#/hr)			2	2								
Confl. Bikes (#/hr)			1			1						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	3%	11%	10%	10%	23%	7%	4%	3%	9%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	123	360	0	101	152	0	109	596	0	34	755	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	14.0		6.5	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	25.0		13.0	25.0		13.0	29.0		13.0	29.0	
Total Split (%)	16.3%	31.3%		16.3%	31.3%		16.3%	36.3%		16.3%	36.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	28.2	18.5		27.7	18.2		41.4	33.5		37.9	30.1	
Actuated g/C Ratio	0.35	0.23		0.35	0.23		0.52	0.42		0.47	0.38	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Hicks Road & Illinois Avenue/Industrial Avenue

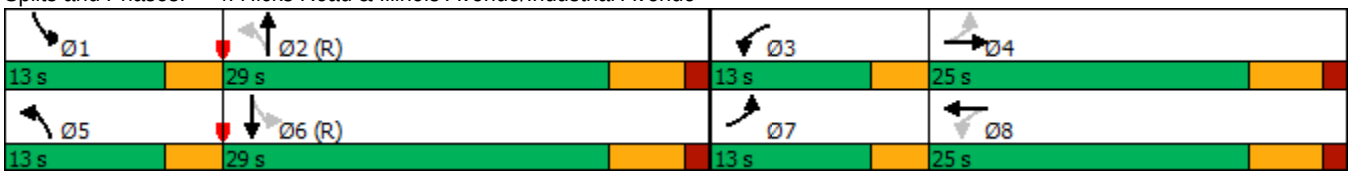
05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.27	0.86		0.36	0.40		0.32	0.41		0.08	0.58	
Control Delay	16.5	46.1		18.3	26.5		13.8	19.6		7.0	22.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.5	46.1		18.3	26.5		13.8	19.6		7.0	22.5	
LOS	B	D		B	C		B	B		A	C	
Approach Delay		38.6			23.2			18.7			21.8	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)	36	143		29	56		29	122		10	193	
Queue Length 95th (ft)	70	#292		59	110		57	177		m10	267	
Internal Link Dist (ft)		859			1081			610			1886	
Turn Bay Length (ft)	155			140			140			140		
Base Capacity (vph)	467	436		304	400		367	1441		466	1310	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.26	0.83		0.33	0.38		0.30	0.41		0.07	0.58	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 54.5 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 24.6 Intersection LOS: C
Intersection Capacity Utilization 68.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Hicks Road & Illinois Avenue/Industrial Avenue



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	638	334	119	954	1	525	0	200	2	2	3
Future Volume (vph)	1	638	334	119	954	1	525	0	200	2	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	160		0	0		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			120			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt			0.850					0.915			0.942	
Flt Protected				0.950			0.950	0.979			0.986	
Satd. Flow (prot)	0	3505	1553	1770	3574	0	1698	1592	0	0	1765	0
Flt Permitted		0.954		0.294			0.950	0.979				
Satd. Flow (perm)	0	3344	1553	548	3574	0	1698	1592	0	0	1790	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		358			1471			611			204	
Travel Time (s)		7.0			28.7			10.4			4.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	4%	2%	1%	0%	1%	0%	2%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							29%					
Lane Group Flow (vph)	0	687	359	128	1027	0	401	379	0	0	7	0
Turn Type	Perm	NA	pm+ov	pm+pt	NA		Split	NA		Perm	NA	
Protected Phases		2	8	1	6		8	8			4	
Permitted Phases	2		2	6						4		
Detector Phase	2	2	8	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	8.0	3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	21.0	21.0	14.0	6.5	21.0		14.0	14.0		14.0	14.0	
Total Split (s)	41.6	41.6	45.5	26.0	67.6		45.5	45.5		16.9	16.9	
Total Split (%)	32.0%	32.0%	35.0%	20.0%	52.0%		35.0%	35.0%		13.0%	13.0%	
Yellow Time (s)	4.5	4.5	4.5	3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5	1.5	0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0	6.0	3.5	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Min	C-Min	None	None	C-Min		None	None		None	None	
Act Effct Green (s)		63.5	106.1	79.3	76.8		37.8	37.8			9.0	
Actuated g/C Ratio		0.49	0.82	0.61	0.59		0.29	0.29			0.07	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

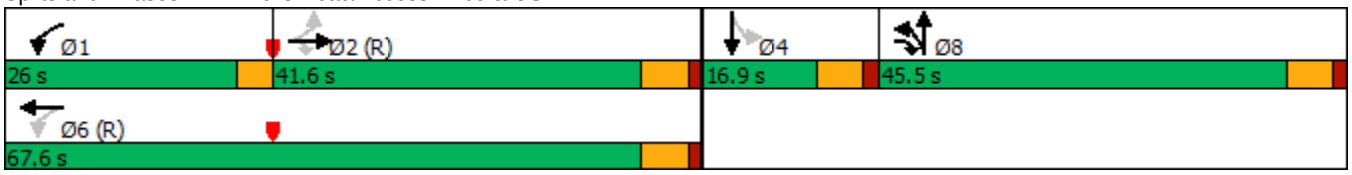
05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.42	0.28	0.30	0.49		0.81	0.82			0.06	
Control Delay		24.8	3.4	14.7	17.8		56.2	57.6			56.7	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay		24.8	3.4	14.7	17.8		56.2	57.6			56.7	
LOS		C	A	B	B		E	E			E	
Approach Delay		17.5			17.5			56.9			56.7	
Approach LOS		B			B			E			E	
Queue Length 50th (ft)		188	42	42	246		320	303			6	
Queue Length 95th (ft)		318	82	95	398		#461	#463			22	
Internal Link Dist (ft)		278			1391			531			124	
Turn Bay Length (ft)			200	160								
Base Capacity (vph)		1634	1303	545	2111		532	499			150	
Starvation Cap Reductn		0	0	0	0		0	0			0	
Spillback Cap Reductn		0	0	0	0		0	0			0	
Storage Cap Reductn		0	0	0	0		0	0			0	
Reduced v/c Ratio		0.42	0.28	0.23	0.49		0.75	0.76			0.05	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 22.5 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 27.9 Intersection LOS: C
Intersection Capacity Utilization 86.4% ICU Level of Service E
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Hicks Road/Access Drice & US 14



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	0	113	5	0	8	2	643	1	0	453	2
Future Volume (vph)	74	0	113	5	0	8	2	643	1	0	453	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		0	70		0	45		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	80			25			60			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00				
Frt		0.850			0.917						0.999	
Flt Protected	0.950				0.981		0.950					
Satd. Flow (prot)	1805	1583	0	0	1592	0	1805	3574	0	1900	3468	0
Flt Permitted	0.746				0.857		0.394					
Satd. Flow (perm)	1417	1583	0	0	1391	0	749	3574	0	1900	3468	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		537			178			238			611	
Travel Time (s)		12.2			4.0			4.1			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	0%	0%	12%	0%	1%	0%	0%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	151	0	0	18	0	3	858	0	0	607	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	18.0	18.0		18.0	18.0		13.0	49.0		13.0	49.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%		16.3%	61.3%		16.3%	61.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0			6.0		3.5	6.0		3.5	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	11.8	11.8			11.8		58.7	56.2			54.4	
Actuated g/C Ratio	0.15	0.15			0.15		0.73	0.70			0.68	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

05/29/2019

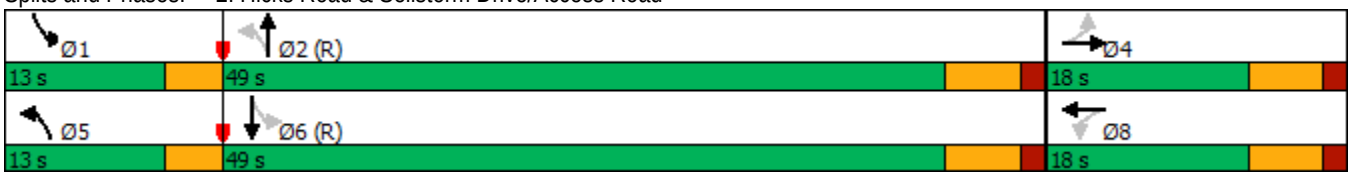
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.48	0.65			0.09		0.00	0.34			0.26	
Control Delay	39.2	46.2			30.3		2.5	4.1			5.9	
Queue Delay	0.0	0.0			0.0		0.0	0.4			0.0	
Total Delay	39.2	46.2			30.3		2.5	4.5			5.9	
LOS	D	D			C		A	A			A	
Approach Delay		43.4			30.3			4.5			5.9	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	44	69			8		1	73			54	
Queue Length 95th (ft)	76	107			22		m1	71			81	
Internal Link Dist (ft)		457			98			158			531	
Turn Bay Length (ft)	130						70					
Base Capacity (vph)	220	246			216		675	2510			2356	
Starvation Cap Reductn	0	0			0		0	1035			0	
Spillback Cap Reductn	0	0			0		0	0			0	
Storage Cap Reductn	0	0			0		0	0			0	
Reduced v/c Ratio	0.45	0.61			0.08		0.00	0.58			0.26	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 3 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 10.8 Intersection LOS: B
Intersection Capacity Utilization 36.9% ICU Level of Service A
Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Hicks Road & Sellstorm Drive/Access Road



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Hicks Road & Illinois Avenue/Industrial Avenue

05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	127	104	120	197	45	162	377	39	51	687	167
Future Volume (vph)	54	127	104	120	197	45	162	377	39	51	687	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	155		0	140		0	140		0	140		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	180			170			175			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor					1.00							
Frt		0.932			0.972			0.986			0.971	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1675	0	1770	1748	0	1719	3486	0	1612	3423	0
Flt Permitted	0.484			0.349			0.132			0.473		
Satd. Flow (perm)	884	1675	0	650	1748	0	239	3486	0	802	3423	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			13			14			37	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		939			1161			690			1966	
Travel Time (s)		18.3			22.6			10.5			29.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)						2						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	9%	2%	5%	7%	5%	2%	3%	12%	2%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	271	0	141	285	0	191	490	0	60	1004	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	14.0		6.5	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	25.0		13.0	25.0		13.0	29.0		13.0	29.0	
Total Split (%)	16.3%	31.3%		16.3%	31.3%		16.3%	36.3%		16.3%	36.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	25.7	15.9		29.0	19.1		41.4	33.0		37.0	27.4	
Actuated g/C Ratio	0.32	0.20		0.36	0.24		0.52	0.41		0.46	0.34	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Hicks Road & Illinois Avenue/Industrial Avenue

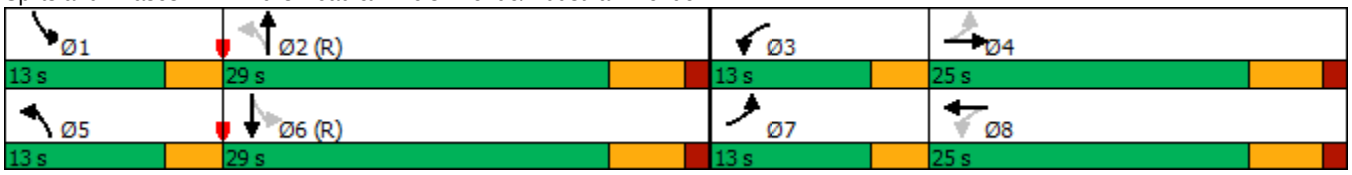
05/29/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.18	0.73		0.39	0.67		0.66	0.34		0.14	0.84	
Control Delay	15.6	36.3		18.9	34.9		26.1	18.9		10.7	34.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.6	36.3		18.9	34.9		26.1	18.9		10.7	34.5	
LOS	B	D		B	C		C	B		B	C	
Approach Delay		32.3			29.6			20.9			33.2	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	19	103		44	124		50	93		19	256	
Queue Length 95th (ft)	38	165		73	190		#117	136		28	#362	
Internal Link Dist (ft)		859			1081			610			1886	
Turn Bay Length (ft)	155			140			140			140		
Base Capacity (vph)	409	434		370	440		303	1446		491	1195	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.16	0.62		0.38	0.65		0.63	0.34		0.12	0.84	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 54.5 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 29.1 Intersection LOS: C
Intersection Capacity Utilization 69.6% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Hicks Road & Illinois Avenue/Industrial Avenue



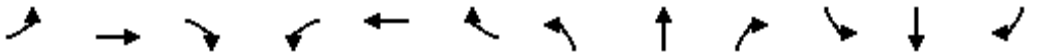
Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Capacity Analysis Summary Sheets

No-Build Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	759	825	199	547	0	184	0	87	0	0	1
Future Volume (vph)	0	759	825	199	547	0	184	0	87	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	160		0	0		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			120			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850					0.899			0.865	
Flt Protected				0.950			0.950	0.984				
Satd. Flow (prot)	0	3505	1583	1687	3406	0	1517	1474	0	0	1644	0
Flt Permitted				0.227			0.950	0.984				
Satd. Flow (perm)	0	3505	1583	403	3406	0	1517	1474	0	0	1644	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		358			1471			611			204	
Travel Time (s)		7.0			28.7			10.4			4.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	2%	7%	6%	0%	13%	0%	6%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							23%					
Lane Group Flow (vph)	0	816	887	214	588	0	152	140	0	0	1	0
Turn Type		NA	pm+ov	pm+pt	NA		Split	NA			NA	
Protected Phases		2	8	1	6		8	8			4	
Permitted Phases	2		2	6						4		
Detector Phase	2	2	8	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	8.0	3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	21.0	21.0	14.0	6.5	21.0		14.0	14.0		14.0	14.0	
Total Split (s)	58.5	58.5	32.5	23.4	81.9		32.5	32.5		15.6	15.6	
Total Split (%)	45.0%	45.0%	25.0%	18.0%	63.0%		25.0%	25.0%		12.0%	12.0%	
Yellow Time (s)	4.5	4.5	4.5	3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5	1.5	0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0	6.0	3.5	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Min	C-Min	None	None	C-Min		None	None		None	None	
Act Effct Green (s)		61.6	103.9	80.2	77.7		37.5	37.5			8.0	
Actuated g/C Ratio		0.47	0.80	0.62	0.60		0.29	0.29			0.06	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.49	0.70	0.58	0.29		0.35	0.33			0.01	
Control Delay		25.0	10.4	17.2	13.2		42.9	42.7			58.0	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay		25.0	10.4	17.2	13.2		42.9	42.7			58.0	
LOS		C	B	B	B		D	D			E	
Approach Delay		17.4			14.2			42.8			58.0	
Approach LOS		B			B			D			E	
Queue Length 50th (ft)		185	201	53	87		118	109			1	
Queue Length 95th (ft)		331	#552	119	160		192	178			7	
Internal Link Dist (ft)		278			1391			531			124	
Turn Bay Length (ft)			200	160								
Base Capacity (vph)		1687	1265	445	2135		437	425			121	
Starvation Cap Reductn		0	0	0	0		0	0			0	
Spillback Cap Reductn		0	0	0	0		0	0			0	
Storage Cap Reductn		0	0	0	0		0	0			0	
Reduced v/c Ratio		0.48	0.70	0.48	0.28		0.35	0.33			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 22.5 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 19.1		Intersection LOS: B	
Intersection Capacity Utilization 87.9%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Hicks Road/Access Drice & US 14

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	13	1	0	1	18	268	41	92	923	9
Future Volume (vph)	2	0	13	1	0	1	18	268	41	92	923	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		0	70		0	45		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	80			25			60			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.850			0.932			0.980			0.999	
Flt Protected	0.950				0.976		0.950			0.950		
Satd. Flow (prot)	1805	1003	0	0	864	0	1543	3236	0	1787	3526	0
Flt Permitted							0.295			0.533		
Satd. Flow (perm)	1900	1003	0	0	885	0	479	3236	0	1003	3526	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		537			178			238			611	
Travel Time (s)		12.2			4.0			4.1			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	61%	100%	0%	100%	17%	10%	5%	1%	2%	33%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	14	0	0	2	0	19	322	0	96	970	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	18.0	18.0		18.0	18.0		13.0	49.0		13.0	49.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%		16.3%	61.3%		16.3%	61.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0			6.0		3.5	6.0		3.5	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	8.5	8.5			8.4		70.2	64.3		72.2	70.7	
Actuated g/C Ratio	0.11	0.11			0.10		0.88	0.80		0.90	0.88	

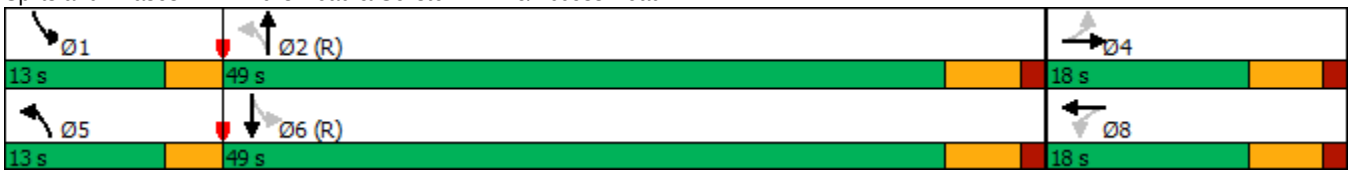
Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.01	0.13			0.02		0.04	0.12		0.10	0.31	
Control Delay	31.5	35.0			32.0		1.4	3.4		1.3	3.2	
Queue Delay	0.0	0.0			0.0		0.0	0.2		0.0	0.0	
Total Delay	31.5	35.0			32.0		1.4	3.6		1.3	3.2	
LOS	C	C			C		A	A		A	A	
Approach Delay		34.6			32.0			3.4			3.0	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	1	7			1		1	14		0	0	
Queue Length 95th (ft)	7	23			7		4	49		19	166	
Internal Link Dist (ft)		457			98			158			531	
Turn Bay Length (ft)	130						70			45		
Base Capacity (vph)	285	150			132		563	2602		1012	3115	
Starvation Cap Reductn	0	0			0		0	1464		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	44	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.01	0.09			0.02		0.03	0.28		0.09	0.32	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 3 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.31			
Intersection Signal Delay: 3.5		Intersection LOS: A	
Intersection Capacity Utilization 49.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Hicks Road & Sellstorm Drive/Access Road



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Illinois Avenue/Industrial Avenue & Hicks Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	186	173	101	120	32	109	563	59	34	670	70
Future Volume (vph)	136	186	173	101	120	32	109	563	59	34	670	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	155		0	140		0	140		0	140		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	180			170			175			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		1.00	1.00							
Frt		0.928			0.968			0.986			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	1638	0	1641	1627	0	1687	3396	0	1656	3462	0
Flt Permitted	0.600			0.295			0.223			0.368		
Satd. Flow (perm)	1056	1638	0	509	1627	0	396	3396	0	641	3462	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			16			14			14	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		939			1161			690			1966	
Travel Time (s)		18.3			22.6			10.5			29.8	
Confl. Peds. (#/hr)			2	2								
Confl. Bikes (#/hr)			1			1						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	3%	11%	10%	10%	23%	7%	5%	3%	9%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	140	370	0	104	157	0	112	641	0	35	763	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	14.0		6.5	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	25.0		13.0	25.0		13.0	29.0		13.0	29.0	
Total Split (%)	16.3%	31.3%		16.3%	31.3%		16.3%	36.3%		16.3%	36.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	29.2	19.3		27.5	16.9		40.6	32.6		37.0	29.2	
Actuated g/C Ratio	0.36	0.24		0.34	0.21		0.51	0.41		0.46	0.36	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

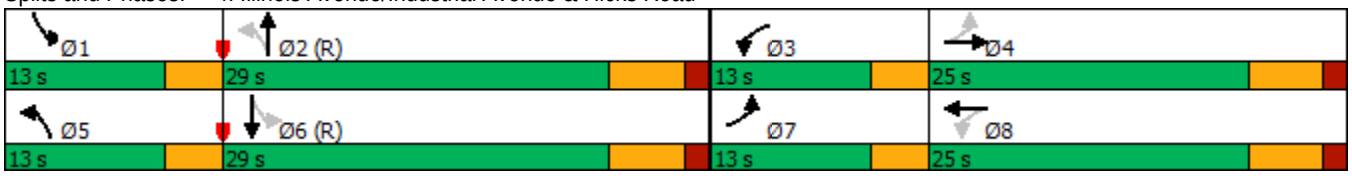
Lanes, Volumes, Timings
4: Illinois Avenue/Industrial Avenue & Hicks Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.31	0.85		0.36	0.44		0.34	0.46		0.09	0.60	
Control Delay	16.9	44.6		18.0	27.9		14.3	20.5		7.0	23.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.9	44.6		18.0	27.9		14.3	20.5		7.0	23.0	
LOS	B	D		B	C		B	C		A	C	
Approach Delay		37.0			23.9			19.6			22.3	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)	42	150		30	59		30	134		11	196	
Queue Length 95th (ft)	78	#305		61	113		58	193		m10	270	
Internal Link Dist (ft)		859			1081			610			1886	
Turn Bay Length (ft)	155			140			140			140		
Base Capacity (vph)	461	439		317	399		355	1392		434	1270	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.30	0.84		0.33	0.39		0.32	0.46		0.08	0.60	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 54.5 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 24.8		Intersection LOS: C	
Intersection Capacity Utilization 69.5%		ICU Level of Service C	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Illinois Avenue/Industrial Avenue & Hicks Road



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Capacity Analysis Summary Sheets

No-Build Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	658	360	152	984	1	560	0	239	2	2	3
Future Volume (vph)	1	658	360	152	984	1	560	0	239	2	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	160		0	0		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			120			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt			0.850					0.907			0.942	
Flt Protected				0.950			0.950	0.981			0.986	
Satd. Flow (prot)	0	3505	1553	1752	3574	0	1698	1552	0	0	1765	0
Flt Permitted		0.954		0.264			0.950	0.981				
Satd. Flow (perm)	0	3344	1553	487	3574	0	1698	1552	0	0	1790	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		358			1471			611			204	
Travel Time (s)		7.0			28.7			10.4			4.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	4%	3%	1%	0%	1%	0%	5%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							26%					
Lane Group Flow (vph)	0	709	387	163	1059	0	445	414	0	0	7	0
Turn Type	Perm	NA	pm+ov	pm+pt	NA		Split	NA		Perm	NA	
Protected Phases		2	8	1	6		8	8			4	
Permitted Phases	2		2	6						4		
Detector Phase	2	2	8	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	8.0	3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	21.0	21.0	14.0	6.5	21.0		14.0	14.0		14.0	14.0	
Total Split (s)	41.6	41.6	45.5	26.0	67.6		45.5	45.5		16.9	16.9	
Total Split (%)	32.0%	32.0%	35.0%	20.0%	52.0%		35.0%	35.0%		13.0%	13.0%	
Yellow Time (s)	4.5	4.5	4.5	3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5	1.5	0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0	6.0	3.5	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Min	C-Min	None	None	C-Min		None	None		None	None	
Act Effct Green (s)		58.1	104.5	75.5	73.0		41.6	41.6			9.0	
Actuated g/C Ratio		0.45	0.80	0.58	0.56		0.32	0.32			0.07	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

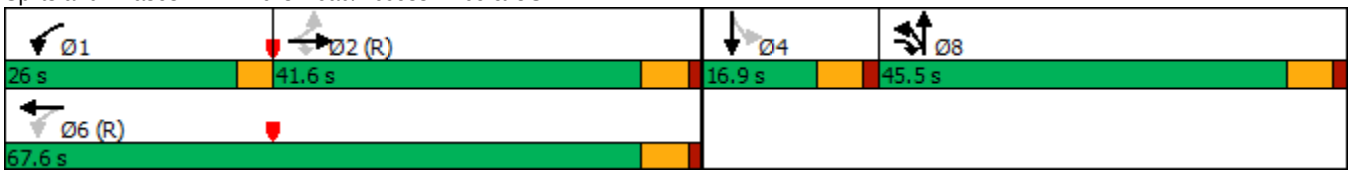
Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.47	0.31	0.41	0.53		0.82	0.83			0.06	
Control Delay		28.9	4.0	17.7	20.3		53.8	56.3			56.7	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay		28.9	4.0	17.7	20.3		53.8	56.3			56.7	
LOS		C	A	B	C		D	E			E	
Approach Delay		20.1			19.9			55.0			56.7	
Approach LOS		C			B			D			E	
Queue Length 50th (ft)		217	52	61	284		345	323			6	
Queue Length 95th (ft)		340	102	120	415		#566	#544			22	
Internal Link Dist (ft)		278			1391			531			124	
Turn Bay Length (ft)			200	160								
Base Capacity (vph)		1494	1263	501	2007		559	511			150	
Starvation Cap Reductn		0	0	0	0		0	0			0	
Spillback Cap Reductn		0	0	0	0		0	0			0	
Storage Cap Reductn		0	0	0	0		0	0			0	
Reduced v/c Ratio		0.47	0.31	0.33	0.53		0.80	0.81			0.05	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 22.5 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 29.5 Intersection LOS: C
Intersection Capacity Utilization 89.9% ICU Level of Service E
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Hicks Road/Access Drice & US 14



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	0	113	27	0	60	2	665	20	45	467	2
Future Volume (vph)	74	0	113	27	0	60	2	665	20	45	467	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		0	70		0	45		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	80			25			60			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00				
Frt		0.850			0.907			0.996			0.999	
Flt Protected	0.950				0.985		0.950			0.950		
Satd. Flow (prot)	1805	1583	0	0	1697	0	1805	3559	0	1805	3468	0
Flt Permitted	0.710				0.819		0.414			0.263		
Satd. Flow (perm)	1349	1583	0	0	1411	0	787	3559	0	500	3468	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		537			178			238			611	
Travel Time (s)		12.2			4.0			4.1			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	1%	0%	0%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	151	0	0	116	0	3	914	0	60	626	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	18.0	18.0		18.0	18.0		13.0	49.0		13.0	49.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%		16.3%	61.3%		16.3%	61.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0			6.0		3.5	6.0		3.5	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	11.4	11.4			11.4		56.4	50.6		58.7	54.8	
Actuated g/C Ratio	0.14	0.14			0.14		0.70	0.63		0.73	0.68	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

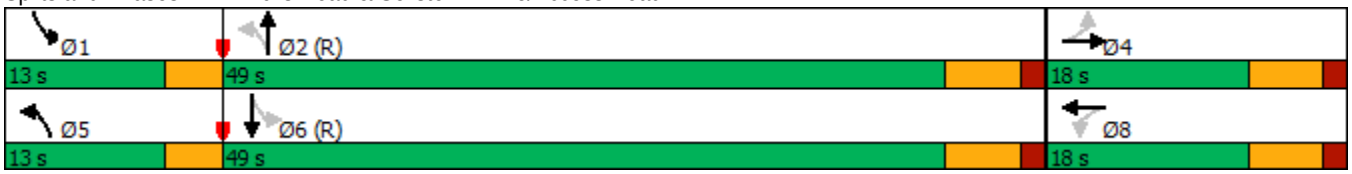
Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.52	0.67			0.58		0.00	0.41		0.13	0.26	
Control Delay	41.9	48.4			44.3		2.0	6.8		3.6	5.8	
Queue Delay	0.0	0.0			0.0		0.0	0.5		0.0	0.0	
Total Delay	41.9	48.4			44.3		2.0	7.3		3.6	5.8	
LOS	D	D			D		A	A		A	A	
Approach Delay		45.8			44.3			7.3			5.6	
Approach LOS		D			D			A			A	
Queue Length 50th (ft)	46	72			54		1	88		7	50	
Queue Length 95th (ft)	77	107			87		m1	95		12	83	
Internal Link Dist (ft)		457			98			158			531	
Turn Bay Length (ft)	130						70			45		
Base Capacity (vph)	202	237			211		699	2250		524	2375	
Starvation Cap Reductn	0	0			0		0	818		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.49	0.64			0.55		0.00	0.64		0.11	0.26	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 3 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 13.8		Intersection LOS: B	
Intersection Capacity Utilization 47.5%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Hicks Road & Sellstorm Drive/Access Road



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Illinois Person/Industrial Avenue & Hicks Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	131	107	124	203	46	167	402	40	53	723	179
Future Volume (vph)	62	131	107	124	203	46	167	402	40	53	723	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	155		0	140		0	140		0	140		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	180			170			175			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor					1.00							
Frt		0.932			0.972			0.986			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1675	0	1770	1748	0	1719	3487	0	1612	3426	0
Flt Permitted	0.462			0.342			0.136			0.460		
Satd. Flow (perm)	844	1675	0	637	1748	0	246	3487	0	780	3426	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			13			13			38	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		939			1161			690			1966	
Travel Time (s)		18.3			22.6			10.5			29.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)						2						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	9%	2%	5%	7%	5%	2%	3%	12%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	280	0	146	293	0	196	520	0	62	1062	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	14.0		6.5	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	25.0		13.0	25.0		13.0	29.0		13.0	29.0	
Total Split (%)	16.3%	31.3%		16.3%	31.3%		16.3%	36.3%		16.3%	36.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	26.1	16.1		29.1	19.2		41.0	30.8		36.6	27.0	
Actuated g/C Ratio	0.33	0.20		0.36	0.24		0.51	0.38		0.46	0.34	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Illinois Person/Industrial Avenue & Hicks Road

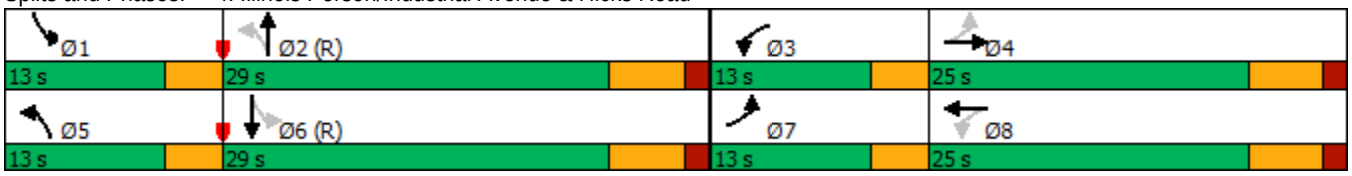
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.20	0.75		0.41	0.68		0.67	0.39		0.14	0.90	
Control Delay	15.8	37.2		19.1	35.9		26.4	20.4		10.7	40.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.8	37.2		19.1	35.9		26.4	20.4		10.7	40.2	
LOS	B	D		B	D		C	C		B	D	
Approach Delay		32.8			30.3			22.1			38.6	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	22	107		46	127		52	101		20	~304	
Queue Length 95th (ft)	42	171		75	197		#121	146		30	#396	
Internal Link Dist (ft)		859			1081			610			1886	
Turn Bay Length (ft)	155			140			140			140		
Base Capacity (vph)	402	434		367	440		305	1349		478	1180	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.18	0.65		0.40	0.67		0.64	0.39		0.13	0.90	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 54.5 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 31.9 Intersection LOS: C
Intersection Capacity Utilization 71.9% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Illinois Person/Industrial Avenue & Hicks Road



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

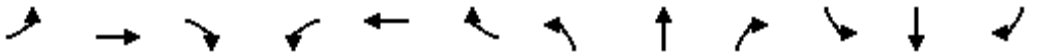
Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Capacity Analysis Summary Sheets

Projected Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

06/30/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	754	840	225	547	0	188	0	95	0	0	1
Future Volume (vph)	0	754	840	225	547	0	188	0	95	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	160		0	0		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			120			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850					0.895			0.865	
Flt Protected				0.950			0.950	0.985				
Satd. Flow (prot)	0	3505	1583	1687	3406	0	1517	1472	0	0	1644	0
Flt Permitted				0.223			0.950	0.985				
Satd. Flow (perm)	0	3505	1583	396	3406	0	1517	1472	0	0	1644	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		358			1471			611			204	
Travel Time (s)		7.0			28.7			10.4			4.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	2%	7%	6%	0%	13%	0%	6%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							22%					
Lane Group Flow (vph)	0	811	903	242	588	0	158	146	0	0	1	0
Turn Type		NA	pm+ov	pm+pt	NA		Split	NA			NA	
Protected Phases		2	8	1	6		8	8			4	
Permitted Phases	2		2	6						4		
Detector Phase	2	2	8	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	8.0	3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	21.0	21.0	14.0	6.5	21.0		14.0	14.0		14.0	14.0	
Total Split (s)	58.5	58.5	32.5	23.4	81.9		32.5	32.5		15.6	15.6	
Total Split (%)	45.0%	45.0%	25.0%	18.0%	63.0%		25.0%	25.0%		12.0%	12.0%	
Yellow Time (s)	4.5	4.5	4.5	3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5	1.5	0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0	6.0	3.5	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Min	C-Min	None	None	C-Min		None	None		None	None	
Act Effct Green (s)		59.8	102.7	79.6	77.1		38.1	38.1			8.0	
Actuated g/C Ratio		0.46	0.79	0.61	0.59		0.29	0.29			0.06	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

06/30/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.50	0.72	0.64	0.29		0.36	0.34			0.01	
Control Delay		26.2	11.5	19.2	13.3		42.3	42.0			58.0	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay		26.2	11.5	19.2	13.3		42.3	42.0			58.0	
LOS		C	B	B	B		D	D			E	
Approach Delay		18.5			15.1			42.2			58.0	
Approach LOS		B			B			D			E	
Queue Length 50th (ft)		200	228	66	94		121	111			1	
Queue Length 95th (ft)		336	#650	134	160		200	187			7	
Internal Link Dist (ft)		278			1391			531			124	
Turn Bay Length (ft)			200	160								
Base Capacity (vph)		1631	1250	440	2106		444	431			121	
Starvation Cap Reductn		0	0	0	0		0	0			0	
Spillback Cap Reductn		0	0	0	0		0	0			0	
Storage Cap Reductn		0	0	0	0		0	0			0	
Reduced v/c Ratio		0.50	0.72	0.55	0.28		0.36	0.34			0.01	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 22.5 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 20.0 Intersection LOS: C
Intersection Capacity Utilization 88.8% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Hicks Road/Access Drice & US 14

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

06/30/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	0	19	1	0	1	36	268	41	92	923	50
Future Volume (vph)	14	0	19	1	0	1	36	268	41	92	923	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		0	70		0	45		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	80			25			60			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.850			0.932			0.980			0.992	
Flt Protected	0.950				0.976		0.950			0.950		
Satd. Flow (prot)	1805	1003	0	0	864	0	1543	3236	0	1787	3457	0
Flt Permitted	0.757				0.832		0.267			0.542		
Satd. Flow (perm)	1438	1003	0	0	737	0	434	3236	0	1020	3457	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		537			178			238			611	
Travel Time (s)		12.2			4.0			4.1			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	61%	100%	0%	100%	17%	10%	5%	1%	2%	33%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	20	0	0	2	0	38	322	0	96	1013	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	18.0	18.0		18.0	18.0		13.0	49.0		13.0	49.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%		16.3%	61.3%		16.3%	61.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0			6.0		3.5	6.0		3.5	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	8.8	8.8			8.8		64.0	57.9		65.6	61.3	
Actuated g/C Ratio	0.11	0.11			0.11		0.80	0.72		0.82	0.77	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

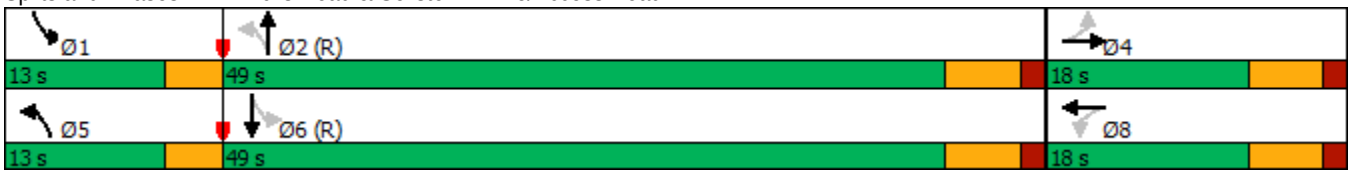
Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

06/30/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.09	0.18			0.02		0.09	0.14		0.11	0.38	
Control Delay	32.7	35.7			31.5		2.5	5.8		2.4	6.7	
Queue Delay	0.0	0.0			0.0		0.0	0.1		0.0	0.0	
Total Delay	32.7	35.7			31.5		2.5	5.9		2.4	6.7	
LOS	C	D			C		A	A		A	A	
Approach Delay		34.4			31.5			5.5			6.3	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	7	9			1		1	32		8	122	
Queue Length 95th (ft)	24	29			7		6	48		21	188	
Internal Link Dist (ft)		457			98			158			531	
Turn Bay Length (ft)	130						70			45		
Base Capacity (vph)	215	150			110		493	2340		946	2649	
Starvation Cap Reductn	0	0			0		0	1142		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.07	0.13			0.02		0.08	0.27		0.10	0.38	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 3 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.38			
Intersection Signal Delay: 6.8		Intersection LOS: A	
Intersection Capacity Utilization 50.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Hicks Road & Sellstorm Drive/Access Road



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Illinois Avenue/Industrial Avenue & Hicks Road 06/30/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	186	173	101	120	32	109	575	59	34	674	72
Future Volume (vph)	142	186	173	101	120	32	109	575	59	34	674	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	155		0	140		0	140		0	140		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	180			170			175			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99		1.00	1.00							
Frt		0.928			0.968			0.986			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	1638	0	1641	1627	0	1687	3396	0	1656	3462	0
Flt Permitted	0.596			0.299			0.220			0.359		
Satd. Flow (perm)	1049	1638	0	516	1627	0	391	3396	0	626	3462	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			16			14			14	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		939			1161			690			1966	
Travel Time (s)		18.3			22.6			10.5			29.8	
Confl. Peds. (#/hr)			2	2								
Confl. Bikes (#/hr)			1			1						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	3%	11%	10%	10%	23%	7%	5%	3%	9%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	146	370	0	104	157	0	112	654	0	35	769	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	14.0		6.5	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	25.0		13.0	25.0		13.0	29.0		13.0	29.0	
Total Split (%)	16.3%	31.3%		16.3%	31.3%		16.3%	36.3%		16.3%	36.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	29.3	19.4		27.5	16.8		40.6	32.6		37.0	29.1	
Actuated g/C Ratio	0.37	0.24		0.34	0.21		0.51	0.41		0.46	0.36	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Illinois Avenue/Industrial Avenue & Hicks Road

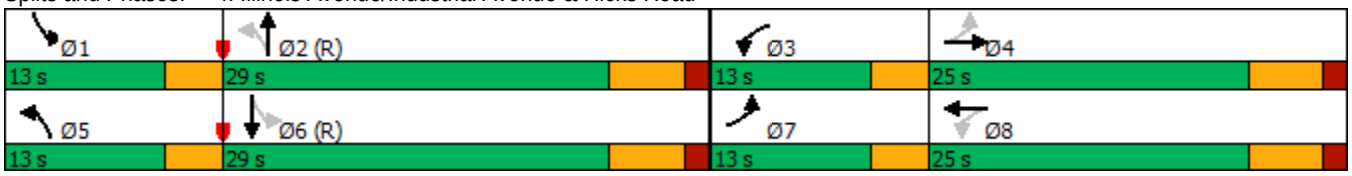
06/30/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.32	0.85		0.36	0.44		0.34	0.47		0.09	0.61	
Control Delay	17.1	44.4		18.0	27.9		14.3	20.7		5.9	21.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.1	44.4		18.0	27.9		14.3	20.7		5.9	21.7	
LOS	B	D		B	C		B	C		A	C	
Approach Delay		36.7			24.0			19.7			21.0	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)	44	150		30	59		30	138		5	198	
Queue Length 95th (ft)	81	#305		61	113		58	197		m10	273	
Internal Link Dist (ft)		859			1081			610			1886	
Turn Bay Length (ft)	155			140			140			140		
Base Capacity (vph)	460	439		319	398		353	1391		429	1269	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.32	0.84		0.33	0.39		0.32	0.47		0.08	0.61	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 54.5 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 24.4 Intersection LOS: C
Intersection Capacity Utilization 69.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Illinois Avenue/Industrial Avenue & Hicks Road



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Capacity Analysis Summary Sheets

Projected Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

06/30/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	658	365	162	984	1	574	0	265	2	2	3
Future Volume (vph)	1	658	365	162	984	1	574	0	265	2	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	160		0	0		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			120			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt			0.850					0.901			0.942	
Flt Protected				0.950			0.950	0.983			0.986	
Satd. Flow (prot)	0	3505	1553	1752	3574	0	1698	1543	0	0	1765	0
Flt Permitted		0.954		0.251			0.950	0.983				
Satd. Flow (perm)	0	3344	1553	463	3574	0	1698	1543	0	0	1790	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			30	
Link Distance (ft)		358			1471			611			204	
Travel Time (s)		7.0			28.7			10.4			4.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	4%	3%	1%	0%	1%	0%	5%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)							24%					
Lane Group Flow (vph)	0	709	392	174	1059	0	469	433	0	0	7	0
Turn Type	Perm	NA	pm+ov	pm+pt	NA		Split	NA		Perm	NA	
Protected Phases		2	8	1	6		8	8			4	
Permitted Phases	2		2	6						4		
Detector Phase	2	2	8	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0	8.0	3.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	21.0	21.0	14.0	6.5	21.0		14.0	14.0		14.0	14.0	
Total Split (s)	41.6	41.6	45.5	26.0	67.6		45.5	45.5		16.9	16.9	
Total Split (%)	32.0%	32.0%	35.0%	20.0%	52.0%		35.0%	35.0%		13.0%	13.0%	
Yellow Time (s)	4.5	4.5	4.5	3.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5	1.5	0.0	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0	6.0	3.5	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Min	C-Min	None	None	C-Min		None	None		None	None	
Act Effct Green (s)		54.9	103.8	73.0	70.5		44.1	44.1			9.0	
Actuated g/C Ratio		0.42	0.80	0.56	0.54		0.34	0.34			0.07	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
1: Hicks Road/Access Drice & US 14

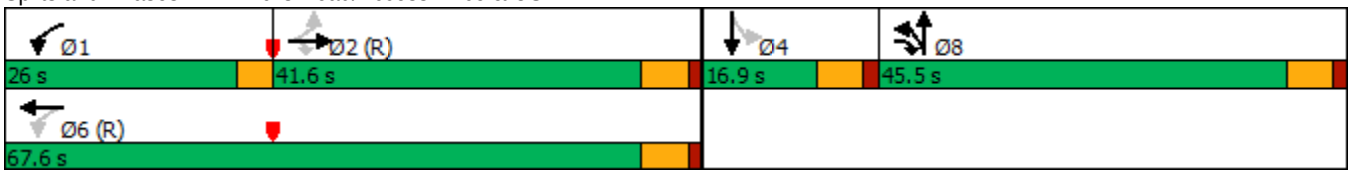
06/30/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.50	0.32	0.46	0.55		0.82	0.83			0.06	
Control Delay		31.3	4.2	19.5	21.9		51.5	53.7			56.7	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay		31.3	4.2	19.5	21.9		51.5	53.7			56.7	
LOS		C	A	B	C		D	D			E	
Approach Delay		21.6			21.5			52.6			56.7	
Approach LOS		C			C			D			E	
Queue Length 50th (ft)		228	56	69	297		360	333			6	
Queue Length 95th (ft)		343	108	127	415		#611	#585			22	
Internal Link Dist (ft)		278			1391			531			124	
Turn Bay Length (ft)			200	160								
Base Capacity (vph)		1412	1247	483	1939		584	531			150	
Starvation Cap Reductn		0	0	0	0		0	0			0	
Spillback Cap Reductn		0	0	0	0		0	0			0	
Storage Cap Reductn		0	0	0	0		0	0			0	
Reduced v/c Ratio		0.50	0.31	0.36	0.55		0.80	0.82			0.05	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 22.5 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 30.3 Intersection LOS: C
Intersection Capacity Utilization 91.1% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Hicks Road/Access Drice & US 14



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

06/30/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	0	131	27	0	60	8	665	20	45	467	17
Future Volume (vph)	114	0	131	27	0	60	8	665	20	45	467	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		0	70		0	45		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	80			25			60			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00				
Frt		0.850			0.907			0.996			0.995	
Flt Protected	0.950				0.985		0.950			0.950		
Satd. Flow (prot)	1805	1583	0	0	1697	0	1805	3559	0	1805	3459	0
Flt Permitted	0.711				0.738		0.406			0.262		
Satd. Flow (perm)	1351	1583	0	0	1272	0	771	3559	0	498	3459	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		537			178			238			611	
Travel Time (s)		12.2			4.0			4.1			10.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	1%	0%	0%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	175	0	0	116	0	11	914	0	60	646	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	18.0	18.0		18.0	18.0		13.0	49.0		13.0	49.0	
Total Split (%)	22.5%	22.5%		22.5%	22.5%		16.3%	61.3%		16.3%	61.3%	
Yellow Time (s)	4.5	4.5		4.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0			6.0		3.5	6.0		3.5	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	11.9	11.9			11.9		56.0	50.0		58.1	54.2	
Actuated g/C Ratio	0.15	0.15			0.15		0.70	0.62		0.73	0.68	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
2: Hicks Road & Sellstorm Drive/Access Road

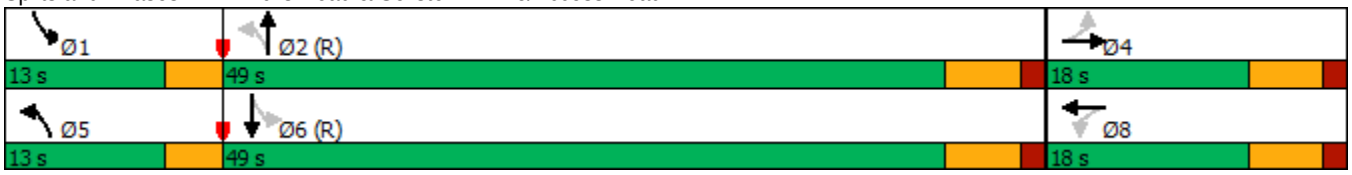
06/30/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.76	0.74			0.61		0.02	0.41		0.13	0.28	
Control Delay	58.2	53.5			47.5		2.1	6.8		3.7	6.0	
Queue Delay	0.0	0.0			0.0		0.0	0.5		0.0	0.0	
Total Delay	58.2	53.5			47.5		2.1	7.4		3.7	6.0	
LOS	E	D			D		A	A		A	A	
Approach Delay		55.7			47.5			7.3			5.8	
Approach LOS		E			D			A			A	
Queue Length 50th (ft)	74	85			55		1	86		7	52	
Queue Length 95th (ft)	#121	#125			88		2	95		12	86	
Internal Link Dist (ft)		457			98			158			531	
Turn Bay Length (ft)	130						70			45		
Base Capacity (vph)	207	243			195		683	2226		520	2344	
Starvation Cap Reductn	0	0			0		0	808		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.73	0.72			0.59		0.02	0.64		0.12	0.28	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 3 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 16.7 Intersection LOS: B
Intersection Capacity Utilization 55.5% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Hicks Road & Sellstorm Drive/Access Road



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Illinois Person/Industrial Avenue & Hicks Road

06/30/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	131	107	124	203	46	167	406	40	53	735	185
Future Volume (vph)	64	131	107	124	203	46	167	406	40	53	735	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	155		0	140		0	140		0	140		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	180			170			175			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor					1.00							
Frt		0.932			0.972			0.987			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1675	0	1770	1748	0	1719	3490	0	1612	3426	0
Flt Permitted	0.458			0.343			0.136			0.456		
Satd. Flow (perm)	837	1675	0	639	1748	0	246	3490	0	774	3426	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			13			13			39	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		939			1161			690			1966	
Travel Time (s)		18.3			22.6			10.5			29.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)						2						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	9%	2%	5%	7%	5%	2%	3%	12%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	280	0	146	293	0	196	525	0	62	1083	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	14.0		6.5	14.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	25.0		13.0	25.0		13.0	29.0		13.0	29.0	
Total Split (%)	16.3%	31.3%		16.3%	31.3%		16.3%	36.3%		16.3%	36.3%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Act Effct Green (s)	26.2	16.1		29.0	19.1		41.0	30.8		36.6	27.0	
Actuated g/C Ratio	0.33	0.20		0.36	0.24		0.51	0.38		0.46	0.34	

Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1

Lanes, Volumes, Timings
4: Illinois Person/Industrial Avenue & Hicks Road

06/30/2020

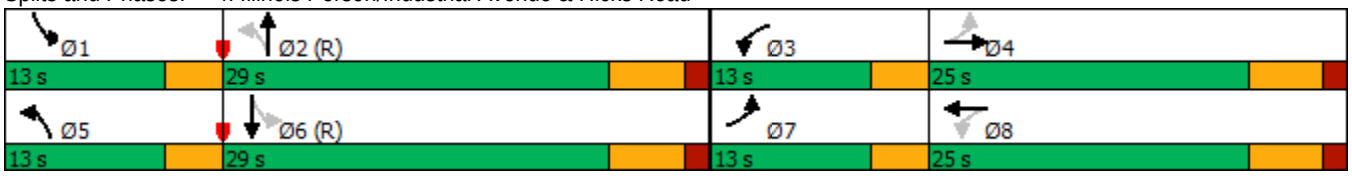
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.21	0.75		0.41	0.69		0.67	0.39		0.14	0.92	
Control Delay	15.9	37.2		19.1	36.1		26.4	20.5		10.7	42.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.9	37.2		19.1	36.1		26.4	20.5		10.7	42.0	
LOS	B	D		B	D		C	C		B	D	
Approach Delay		32.7			30.4			22.1			40.3	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	22	107		46	128		52	103		20	~315	
Queue Length 95th (ft)	43	171		75	197		#121	147		31	#407	
Internal Link Dist (ft)		859			1081			610			1886	
Turn Bay Length (ft)	155			140			140			140		
Base Capacity (vph)	401	434		367	439		305	1351		476	1181	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.19	0.65		0.40	0.67		0.64	0.39		0.13	0.92	

Intersection Summary

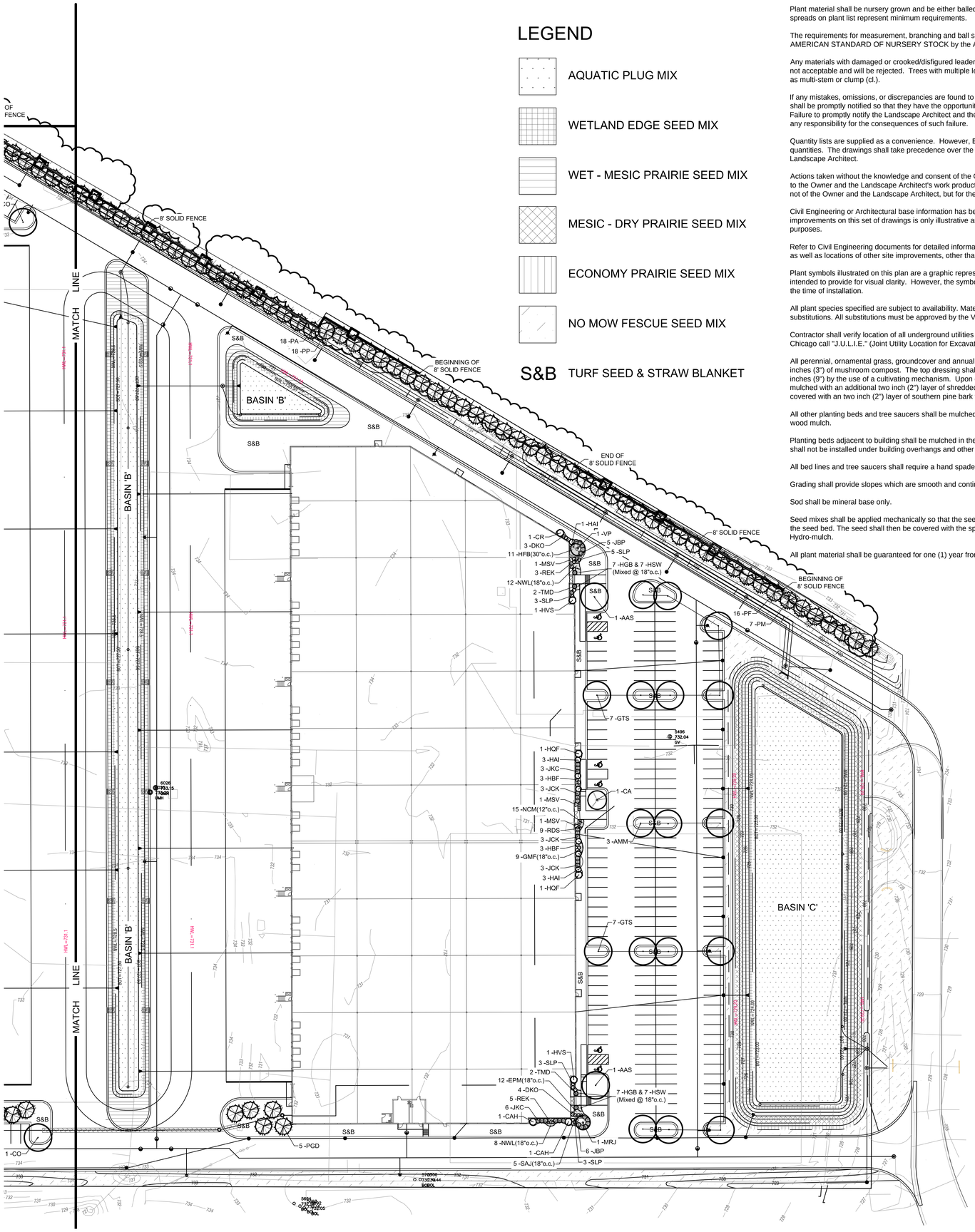
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 54.5 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 32.7 Intersection LOS: C
Intersection Capacity Utilization 72.4% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Illinois Person/Industrial Avenue & Hicks Road



Attachment: Traffic Impact Study - 20-126 Warehouse in Palatine 6-30-2020 ep maw (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1



LEGEND

- AQUATIC PLUG MIX
- WETLAND EDGE SEED MIX
- WET - MESIC PRAIRIE SEED MIX
- MESIC - DRY PRAIRIE SEED MIX
- ECONOMY PRAIRIE SEED MIX
- NO MOW FESCUE SEED MIX
- S&B TURF SEED & STRAW BLANKET

GENERAL NOTES:

Plant material shall be nursery grown and be either balled and bur-lapped or container grown. Sizes and spreads on plant list represent minimum requirements.

The requirements for measurement, branching and ball size shall conform to the latest addition of ANSI Z60.1, AMERICAN STANDARD OF NURSERY STOCK by the American Nursery & Landscape Association.

Any materials with damaged or crooked/disfigured leaders, bark abrasion, sunscald, insect damage, etc. are not acceptable and will be rejected. Trees with multiple leaders will be rejected unless called for in the plant list as multi-stem or clump (cl.).

If any mistakes, omissions, or discrepancies are found to exist with the work product, the Landscape Architect shall be promptly notified so that they have the opportunity to take any steps necessary to resolve the issue. Failure to promptly notify the Landscape Architect and the Owner of such conditions shall absolve them from any responsibility for the consequences of such failure.

Quantity lists are supplied as a convenience. However, Bidders and the Installing Contractor should verify all quantities. The drawings shall take precedence over the lists. Any discrepancies shall be reported to the Landscape Architect.

Actions taken without the knowledge and consent of the Owner and the Landscape Architect or in contradiction to the Owner and the Landscape Architect's work product or recommendations, shall become the responsibility not of the Owner and the Landscape Architect, but for the parties responsible for the taking of such action.

Civil Engineering or Architectural base information has been provided by others. The location of various site improvements on this set of drawings is only illustrative and should not be relied upon for construction purposes.

Refer to Civil Engineering documents for detailed information regarding size, location, depth and type of utilities, as well as locations of other site improvements, other than landscape improvements,

Plant symbols illustrated on this plan are a graphic representation of proposed plant material types and are intended to provide for visual clarity. However, the symbols do not necessarily represent actual plant spread at the time of installation.

All plant species specified are subject to availability. Material shortages in the landscape industry may require substitutions. All substitutions must be approved by the Village, Landscape Architect and Owner.

Contractor shall verify location of all underground utilities prior to digging. For location outside the City of Chicago call "J.U.L.I.E." (Joint Utility Location for Excavators) 1-800-892-0123.

All perennial, ornamental grass, groundcover and annual beds shall be top dressed with a minimum of three inches (3") of mushroom compost. The top dressing shall be worked into the soil to a minimum depth of nine inches (9") by the use of a cultivating mechanism. Upon completion perennials & ornamental grasses shall be mulched with an additional two inch (2") layer of shredded wood mulch; Annuals & groundcovers shall be covered with an two inch (2") layer of southern pine bark fines.

All other planting beds and tree saucers shall be mulched with a minimum of three inches (3") of shredded wood mulch.

Planting beds adjacent to building shall be mulched in their entirety to the building foundation. Plant materials shall not be installed under building overhangs and other such areas which do not receive natural rainfall.

All bed lines and tree saucers shall require a hand spaded edge between lawn and mulched areas.

Grading shall provide slopes which are smooth and continuous. Positive drainage shall be provided in all areas.

Sod shall be mineral base only.

Seed mixes shall be applied mechanically so that the seed is incorporated into the top one-half inch (1/2") of the seed bed. The seed shall then be covered with the specified blanket (installed per manufacturer's. specs) or Hydro-mulch.

All plant material shall be guaranteed for one (1) year from the date of acceptance.

PLANT LIST

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE/ TYPE
		DECIDUOUS SHADE TREES		
AFM	6	Acer f. 'Marmo'	Marmo Freeman Maple	2.5" BB
AMM	3	Acer m. 'Morton'	State Street Maple	2.5" BB
AAS	3	Aesculus x 'Autumn Splender'	Autumn Splender Buckeye	2.5" BB
CO	10	Celtis occidentalis	Hackberry	2.5" BB
GTS	14	Gleditsia t.i.'Skyline'	Skyline Honeylocust	2.5" BB
PMC	2	Platanus x a. "Morton Circle'	Exclamation London Planetree	2.5" BB
QB	3	Quercus bicolor	Swamp White Oak	2.5" BB
QI	2	Quercus imbricaria	Shingle Oak	2.5" BB
UA	7	Ulmus 'Morton'	Accolade Elm	2.5" BB
		EVERGREEN TREES		
PA	34	Picea abies	Norway Spruce	8' BB
PGD	24	Picea g. 'Densata'	Black Hills Spruce	8' BB
PP	42	Picea pungens	Colorado Green Spruce	8' BB
PF	33	Pinus flexilis	Limber Pine	8' BB
PS	15	Pinus strobus	Eastern White Pine	8' BB
PM	27	Pseudotsuga menziesii	Douglas Fir	8' BB
		DECIDUOUS ORNAMENTAL TREES		
CA	2	Cornus alternifolia	Harry Lauder's Walking Stick	6' BBcl.
CCI	2	Crataegus c. inermis	Thornless Cockspur Hawthorn	6' BBcl.
MDW	2	Malus 'Donald Wyman'	Donald Wyman Crabapple	2.5" BB
MRJ	2	Malus 'Red Jewel'	Red Jewel Crabapple	2.5" BB
VP	2	Viburnum prunifolium	Blackhaw Viburnum (tree form)	6' BBcl.
		DECIDUOUS SHRUBS & SHRUB ROSES		
CR	8	Cornus racemosa	Grey Dogwood	3' BB
CAH	4	Corylus americana	American Hazelnut	3' BB
CAP	18	Cotoneaster acutifolia	Peking Cotoneaster	3' BB
DKO	11	Diervilla r. 'G2X88544'	Orange Kodiak Diervilla	18"/#3
HAA	6	Hydrangea a. 'Annabella'	Annabelle Hydrangea	18"/#3
HAI	7	Hydrangea a. 'Abetwo'	Incrediball Hydrangea	24"/#5
HQF	4	Hydrangea p. 'Bulk'	Quick Fire Hydrangea	30"/#5
HVS	4	Hydrangea p. 'Renhy'	Vanilla Strawberry Hyndrangea	30"/#5
HBF	11	Hypericum k. 'SMHKBF'	Blue Festival St. Johnswort	18"/#3
RDS	9	Rosa 'Meiswetdom'	Drift Sweet Rose	18"/#3
REK	21	Rosa 'BAImir'	Easy Elegance Kashmir Rose	18"/#3
RPP	2	Rosa r. 'Purple Pavement'	Purple Pavement Rose	24"/#5
		EVERGREEN SHRUBS		
JKC	27	Juniperus c. 'Kalley's'	Kalleys Compact Juniper	24"/#5
JSG	18	Juniperus c. 'Sea Green'	Sea Green Juniper	24"/#5
JBP	23	Juniperus c. 'Blue Pacific'	Blue Pacific Juniper	24"/#5
TMD	14	Taxus m. 'Densiformis'	Dense Yew	24"/#5
		BROADLEAF EVERGREENS		
BC	15	Buxus m. 'Winter Gem'	Winter Gem Boxwood	#3
		ORNAMENTAL GRASS		
CB	2	Calamgrostis brachytricha	Korean Feather Reed Grass	#1
CID	15	Carex m. 'Ice Dance'	Ice Dance Sedge	#1
MSV	5	Miscanthus s. 'Variegatus'	Variegated Silver Grass	#1
		PERENNIALS		
EPM	36	Echinacea x. 'CBG Cone 2'	Pixie Meadowbrite Coneflower	#1
GMF	18	Geranium s. 'Max Frie'	Max Frie Geranium	#1
HGB	23	Hemerocallis 'Going Bananas'	Going Bananas Daylily	#1
HSW	23	Hemerocallis 'Summer Wine'	Summer Wine Daylily	#1
HGP	5	Heuchera 'Georgia Peach'	Georgia Peach Alumroot	#1
HFB	11	Hosta 'Fragrant Bouquet'	Fragrant Bouquet Hosta	#1
NCM	34	Nepeta x f. 'Cats Meow'	Cats Meow Catmit	#1
NWL	40	Nepeta f. 'Walker's Low'	Walker's Low Catmint	#1
RVLS	7	Rudbeckia h. 'Viette's Little Suzy'	Little Suzy Black-eyed Susan	#1
SAJ	10	Sedum 'Autumn Joy'	Autumn Joy Stonecrop	#1

MATERIAL & LABOR LIST:

QTY	ITEM	DESCRIPTION
17,404 each	Emergent Aquatic Plugs	See Plug List
1,100 SY	Native Seed w/ Straw Blanket	Wetland Edge Seed Mix S75 by North American Green (or equal)
2,200 SY	Native Seed w/ Straw Blanket	Wet-Mesic Prairie Seed Mix S75 by North American Green (or equal)
1,017 SY	Native Seed w/ Straw Blanket	Mesic-Dry Prairie Seed Mix S75 by North American Green (or equal)
1,050 SY	Native Seed w/ Straw Blanket	Economy Prairie Seed Mix S75 by North American Green (or equal)
15,700 SY	Native Seed w/ Straw Blanket	No-Mow Fescue Seed Mix S75 by North American Green (or equal)
3,960 SY	Seed w/ Straw Blanket	Kentucky Bluegrass Blend w/Perennial Rye S75 by North American Green (or equal)
81 CY	Mulch	Shredded Hardwood Bark
6 CY	Mulch	Compost (Yard Waste or Mushroom)
712 LF	Fence	8' Solid Fence T.B.D.

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REVISIONS

3 130' Additional 8' High Solid Fence	01/05/21
2 Added 8' High Solid Fence	12/01/20
1 West & North Bufferyards	10/23/20

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

IRG Ives/Ryan Group, Inc.
1741 S. WIESBROOK ROAD
WHEATON, IL 60189
PHONE: 630.738.0726

Landscape Architecture
Park & Recreation Design
Site & Community Planning

www.ivesryangroup.com

LANDSCAPE PLAN

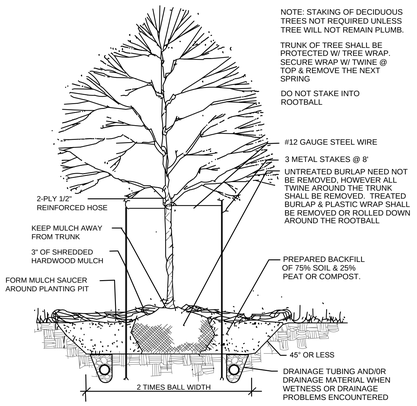
PROJECT NO.: L920 JOB NO.: 9224A

DATE: 02/05/21
SCALE: 1"=40'
PLANNER: RM
DRAWN BY: RM
CHECKED:

SHEET L-1

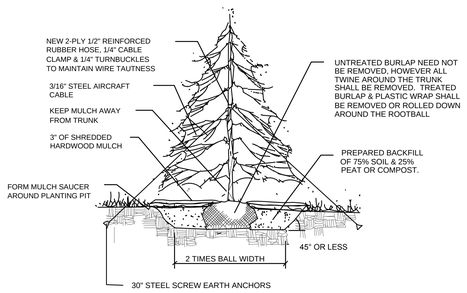
SCALE 1" = 40
0 40 80

Attachment: Final Landscape Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



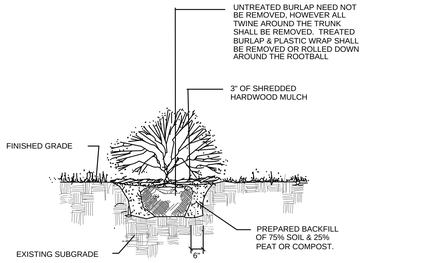
DECIDUOUS TREE

NTS



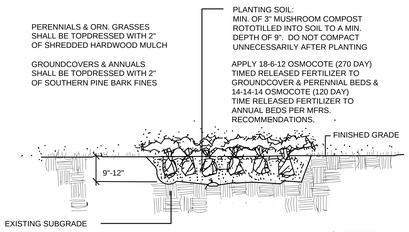
EVERGREEN TREE

NTS



SHRUBS

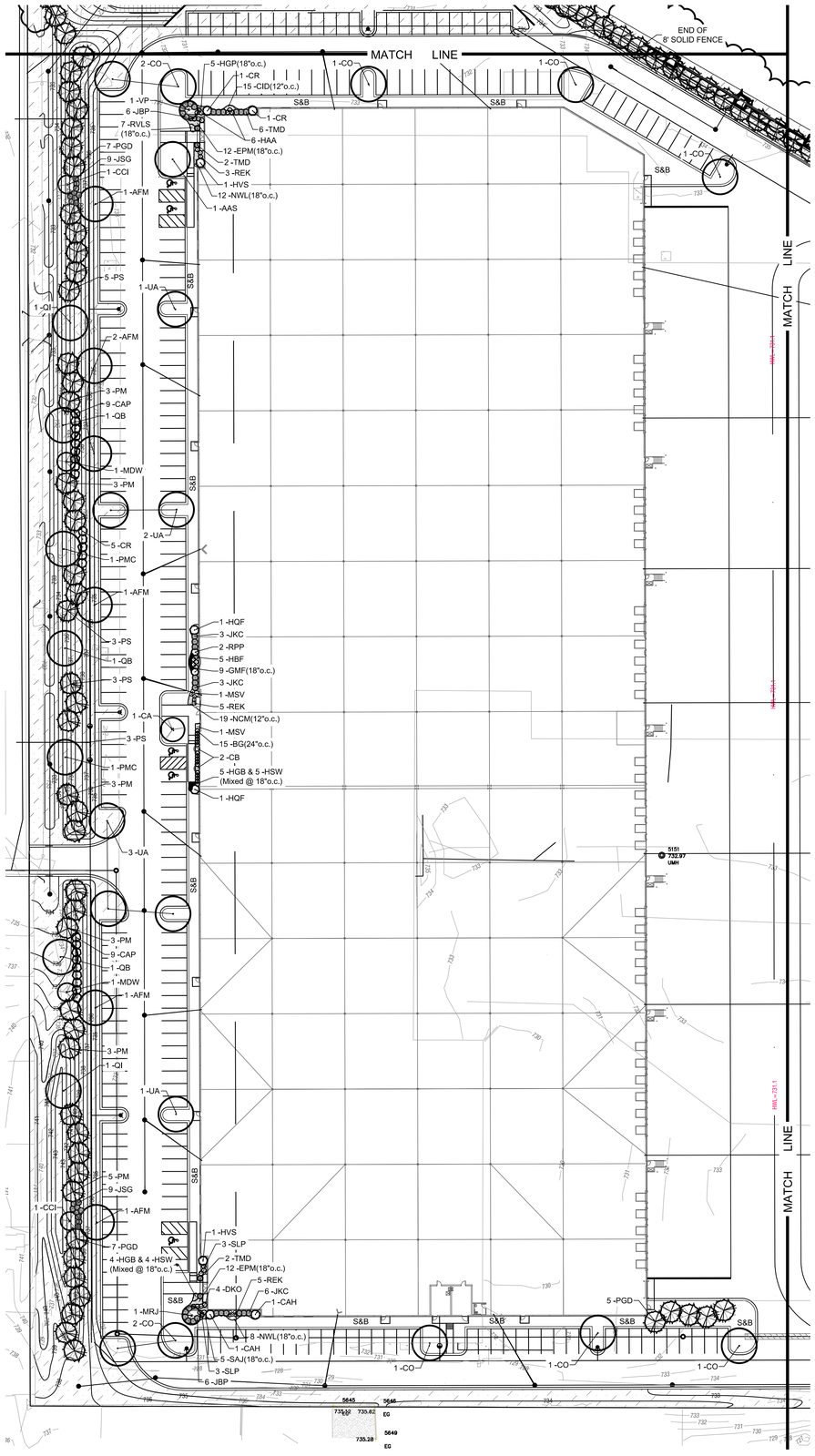
NTS

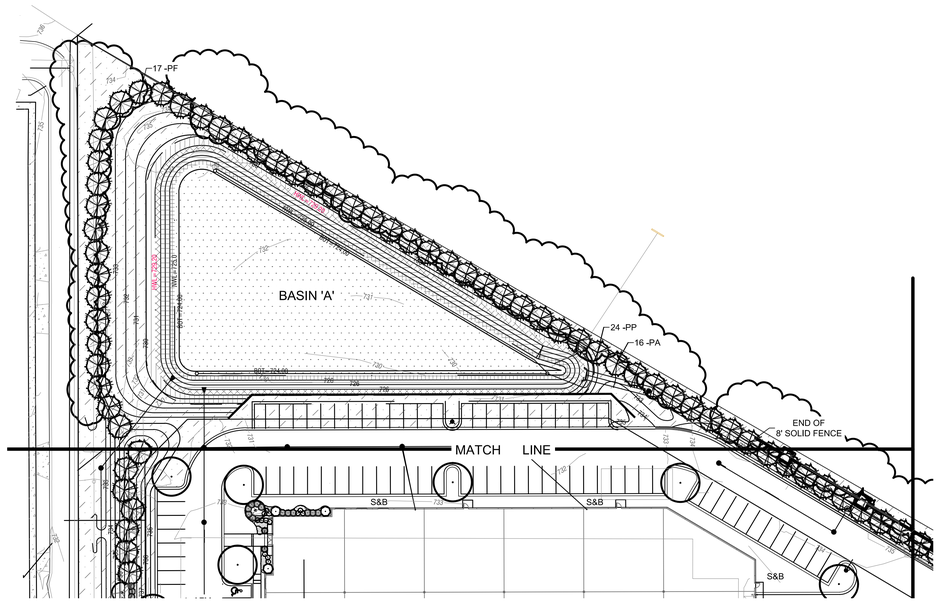


BED PLANTING DETAIL

(PERENNIALS, ORNAMENTAL GRASSES VINES, GROUNDCOVERS & ANNUALS)

NTS





LEGEND

- AQUATIC PLUG MIX
- WETLAND EDGE SEED MIX
- WET - MESIC PRAIRIE SEED MIX
- MESIC - DRY PRAIRIE SEED MIX
- ECONOMY PRAIRIE SEED MIX
- NO MOW FESCUE SEED MIX
- S&B TURF SEED & STRAW BLANKET

SCALE 1" = 40

0 40 80

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REVISIONS

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PALATINE, ILLINOIS

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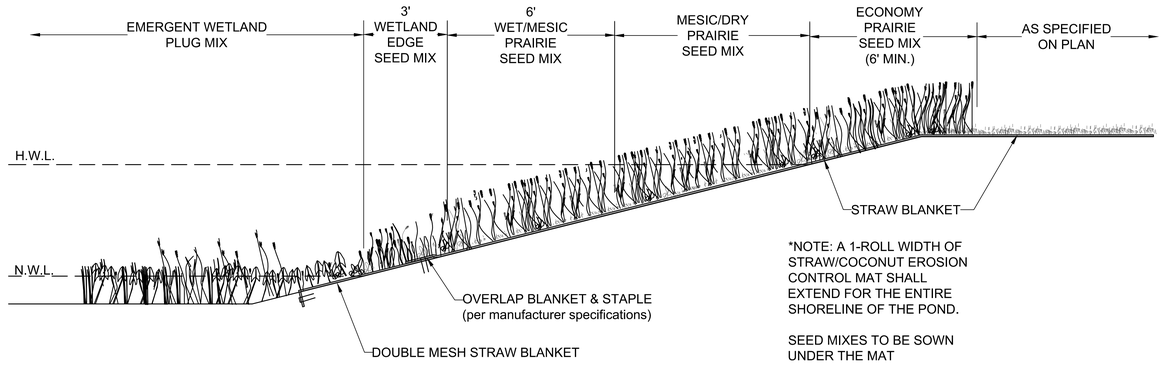
LANDSCAPE PLAN

PROJECT NO.: L920 JOB NO.: 9224A

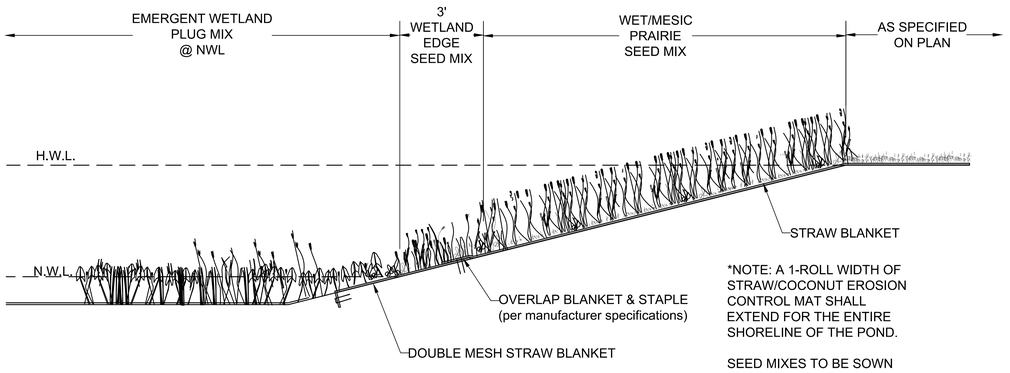
DATE: 02/05/21
SCALE: 1"=40'
PLANNER: RM
DRAWN BY: RM
CHECKED:

SHEET L-2



SECTION - TYPICAL NATURALIZED DETENTION BASIN LANDSCAPING (BASIN A & C)

NTS



SECTION - TYPICAL NATURALIZED DETENTION BASIN LANDSCAPING (BASIN B)

NTS

MESIC-DRY PRAIRIE SEED MIX

Cardno - Apply @38.8 PLS pounds per acre

BOTANICAL/ (COMMON) NAME	PLS OZ /Ac
PERMANENT MATRIX:	
Andropogon gerardii (Big Bluestem)	18.00
Bouteloua curtipendula (Side-Oats Grama	8.00
Carex spp (Prairie Sedge Mix)	4.00
Carex lurida (Bottlebrush Sedge)	3.00
Elymus canadensis (Canadian Wild Rye)	24.00
Panicum virgatum (Swtich Grass)	4.00
Schizachyrium scoparium (Little Bluestem)	20.00
Sorghastrum nutans (Indian Grass)	20.00
TOTAL	**101.00**
TEMPORARY COVER:	
Avena sativa (Seed Oats)	360.00
Lolium multiflorum (Annual Rye)	100.00
TOTAL	**460.00**
FORBS:	
Anemone cylindrica (Thimbleweed)	0.50
Asclepias tuberosa (Butterfly Weed)	1.25
Aster laevis (Smooth Blue Aster)	0.75
Aster novae-angliae (New England Aster)	0.25
Aster oolentangiensis (Sky-Blue Aster)	0.25
Baptisia bracyeata (Cream Wild Indigo)	0.50
Baptisia lactea (White Wild Indigo)	2.00
Chamaecrista fasciculata (Partridge Pea)	13.00
Coreopsis lanceolata (Sand Coreopsis)	3.50
Coreopsis palmata (Prairie Coreopsis)	0.75
Desmanthus illinoensis (Illinois Sensitive Plant)	1.00
Desmodium illinoense (Illinois Tick Trefoil)	0.50
Echinacea purpurea (Purple Coneflower)	6.50
Eryngium yuccifolium (Rattlesnake Master)	2.00
Lespedeza capitata (Round-Headed Bush Clover)	2.00
Liatris aspera (Rough Blazing Star)	2.00
Liatris pycnostachya (Prairie Blazing Star)	0.50
Lupinus perennis (Wild Lupine"	1.25
Monarda fistulosa (Wild Bergamot)	0.75
Parthenium integrifolium (Wild Quinine)	1.00
Potentilla arguta (Prairie Cinquefoil)	0.50
Pycnanthemum virginianum (Common Mountain Mint)	0.50
Ratibida pinnata (Yellow Coneflower)	3.50
Rudbeckia hirta (Black-Eyed Susan)	5.00
Silphium integrifolium (Rosin Weed)	3.00
Silphium laciniatum (Compass Plant)	2.00
Silphium terebinthinaceum (Prairie Dock)	4.00
Solidago nemoralis (Old-field Goldenrod)	0.25
Solidago rigida (Stiff Goldenrod)	2.00
Solidago speciosa (Showy Goldenrod)	0.50
Veronicastrum virginicum (Culver's Root)	0.25
Ziziz aurea (Golden Alexanders)	0.50
TOTAL	**62.25**

WET-MESIC PRAIRIE SEED MIX

Cardno - Apply @36.88 PLS pounds per acre

BOTANICAL/ (COMMON) NAME	PLS OZ /Ac
PERMANENT MATRIX:	
Andropogon gerardii (Big Bluestem)	20.00
Calamagrostis canadensis (Bluejoint Grass)	1.00
Carex spp (Prairie Sedge Mix)	4.00
Carex lurida (Bottlebrush Sedge)	3.00
Carex vulpinoidea (Brown Fox Sedge)	1.00
Elymus virginicus (Virginia Wild Rye)	24.00
Panicum virgatum (Swtich Grass)	2.00
Scirpus pendulus (Red Bulrush)	0.50
Sorghastrum nutans (Indian Grass)	6.00
Spartina pectinata (Prairie Cord Grass)	3.00
TOTAL	**64.50**
TEMPORARY COVER:	
Avena sativa (Seed Oats)	360.00
Lolium multiflorum (Annual Rye)	100.00
TOTAL	**460.00**
FORBS:	
Asclepias syriaca (Common Milkweed)	2.00
Baptisia lactea (White Wild Indigo)	0.75
Chamaecrista fasciculata (Partridge Pea)	12.00
Coreopsis lanceolata (Sand Coreopsis)	3.50
Coreopsis tripteris (Tall Coreopsis)	3.00
Desmodium illinoense (Illinois Tick Trefoil)	0.50
Echinacea purpurea (Purple Coneflower)	3.50
Eryngium yuccifolium (Rattlesnake Master)	2.00
Helenium autumnale (Sneezeweed)	2.50
Helianthus grosseserratus (Sawtooth Sunflower)	0.50
Lespedeza capitata (Round-Headed Bush Clover)	1.50
Liatris spicata (Marsh Blazing Star)	1.00
Monarda fistulosa (Wild Bergamot)	1.00
Oligoneuron rigidum (Stiff Goldenrod)	1.00
Parthenium integrifolium (Wild Quinine)	1.00
Physostegia virginiana (Obedient Plant)	0.25
Pycnanthemum virginianum (Common Mountain Mint)	1.00
Ratibida pinnata (Yellow Coneflower)	5.00
Rudbeckia hirta (Black-Eyed Susan)	4.00
Rudbeckia laciniata (Wild Golden Glow)	1.00
Rudbeckia subtomentosa (Sweet Black-Eyed Susan)	0.50
Senna hebecarpa (Wild Senna)	2.25
Silphium integrifolium (Rosin Weed)	1.00
Silphium laciniatum (Compass Plant)	2.00
Silphium perfoliatum (Cup Plant)	1.00
Silphium terebinthinaceum (Prairie Dock)	6.00
Solidago juncea (Early Goldenrod)	0.25
Solidago rugosa (Rough Goldenrod)	0.25
Symphyotrichum novae-angliae (New England Aster)	0.25
Tradescantia ohiensis (Common Spiderwort)	1.25
Vernonia spp. (Ironweed Mix)	3.00
Veronicastrum virginicum (Culver's Root)	0.25
Ziziz aurea (Golden Alexanders)	0.50
TOTAL	**65.50**

WETLAND EDGE SEED MIX

Cardno - Apply @ 32.83 PLS pounds per acre

BOTANICAL/ (COMMON) NAME	PLS OZ /Ac
PERMANENT MATRIX:	
Bolboschoenus fluviatilis (River Bulrush)	0.50
Carex comosa (Bristly Sedge)	1.00
Carex cristatella (Crested Oval Sedge)	2.00
Carex frankii (Bristly Cattail Sedge)	6.00
Carex vulpinoidea (Brown Fox Sedge)	3.00
Eleocharis palustris (Great Spike Rush)	0.50
Elymus virginicus (Virginia Wild Rye)	12.00
Glyceria striata (Fowl Manna Grass)	1.00
Juncus effusus (Common Rush)	1.00
Leersia oryzoides (Rice Cut Grass)	0.50
Schoenoplectus americanus (Chairmaker's Rush)	1.00
Schoenoplectus tabermaemontani (Softstem Bulrush)	2.50
Scirpus atrovirens (Dark Green Bulrush)	1.00
Scirpus cyperinus (Wool Grass)	0.75
TOTAL	**32.75**
TEMPORARY COVER:	
Avena sativa (Seed Oats)	360.00
Lolium multiflorum (Annual Rye)	100.00
TOTAL	**460.00**
FORBS:	
Acorus calamus (Sweet Flag)	0.50
Alisma spp. (Water Plantain Mix)	2.00
Asclepias incarnata (Swamp Milkweed)	2.00
Bidens spp. (Bidens Mix)	2.00
Doellingeria umbellata (Flat-Topped Aster	0.25
Eupatorium perfoliatum (Common Boneset)	1.00
Helenium autumnale (Sneezeweed)	2.00
Iris virginica (Blue Flag)	4.00
Lobelia cardinalis (Cardinal Flower)	0.10
Lobelia siphilitica (Great Blue Lobelia)	0.25
Lycopus americanus (Common Water Horehound)	0.25
Mimulus ringens (Monkey Flower)	1.50
Penthorum sedoides (Ditch Stonecrop)	0.50
Polygonum spp. (Pinkweed Mix)	0.50
Rudbeckia laciniata (Wild Golden Glow)	0.75
Sagittaria latifolia (Common Arrowhead)	2.00
Senna hebecarpa (Wild Senna)	2.00
Sparganium eurycarpum (Common Bur Reed)	4.00
Symphyotrichum puniceum (Swamp Aster)	1.00
Thalictrum dasycarpum (Purple Meadow Rue)	0.50
Verbena hastata (Blue Vervain)	1.50
Verbesina alternifilia (Wingstem)	2.00
Vernonia spp. (Ironweed Mix)	2.00
TOTAL	**32.60**

ECONOMY PRAIRIE SEED MIX

Cardno- Apply at 37.38 PLS pounds per acre

BOTANICAL/ (COMMON) NAME	PLS OZ /Ac
PERMANENT MATRIX:	
Andropogon gerardii (Big Bluestem)	12.00
Bouteloua curtipendula (Side Oats Grama)	16.00
Carex spp. (Prairie Carex Mix)	3.00
Elymus canadensis (Canada Wild Rye)	24.00
Panicum virgatum (Prairie Switch Grass)	2.50
Schizachyrium scoparium (Little Bluestem)	28.00
Sorghastrum nutans (Indian Grass)	12.00
TOTAL	**97.50**
TEMPORARY COVER:	
Avena sativa (Seed Oats)	360.00
Lolium multiflorum (Annual Rye)	100.00
TOTAL	**460.00**
FORBS:	
Asclepias syriaca (Common Milk)	1.00
Asclepias tuberosa (Butterfly Weed)	1.00
Chamaecrista fasciculata (Partridge Pea)	9.00
Coreopsis lanceolata (Sand Coreopsis)	5.00
Echinacea purpurea (Purple Coneflower)	7.50
Heliopsis helianthoides (False Sunflower)	0.25
Lupinus perennis (Wild Lupine)	1.00
Monarda fistulosa (Wild Bergamot)	0.50
Penstemon digitalis (Foxglove Beard Rongue)	1.00
Pycnanthemum virginianum (Common Mountain Mint)	0.50
Ratibida pinnata (Yellow Coneflower)	3.50
Rudbeckia hirta (Black-Eyed Susan	8.00
Solidago speciosa (Showy Goldenrod)	1.00
Symphyatrichum leave (Smooth Blue Aster)	0.50
Symphyatrichum novae-angliae (New England Aster)	0.75
TOTAL	**40.50**

NO MOW FESCUE SEED MIX

Prairie Nursery Westfield, WI

COMMON NAME	PERCENT	GERMINATION
SR5100 Chewings Fescue	23.52%	85%
Sheep Fescue	23.52%	85%
Dawson Red Fescue	11.76%	85%
SR100 Hard Fescue	11.76%	85%
Scaidis Hard Fescue	11.76%	85%
Creeping Red Fescue	11.70%	85%
Annual Ryegrass	3.88%	90%

Seed Rate 5 lbs per 100 sq. ft. or 220 lbs per acre

"No-Mow" Maintenance Program

Mowing

"No-Mow" lawns may require occasional mowing during the first two (2) years of establishment to control weeds, especially with lawns that are seeded in spring. Most annual weeds can be controlled by mowing at a height of four inches (4") in the first growing season. If biennial weeds such as sweet clover, Queen Anne's Lace, burdock, etc. are a problem in the second year, they should be mowed at four inches (4") just as they begin to flower, usually around mid June. This carefully timed mowing will kill most biennials. A few may survive the mowing, and should be mowed at four inches (4") a second time when they re -bloom later in the season.

Once the "No-Mow" lawn is established there are four (4) basic mowing options "

- No mowing at all
- One late spring mowing, usually in early June when the seedheads appear
- Fall mowing with a mulching mower, es pecially in wooded areas to chop up fallen leaves
- Regular mowing, usually monthly, to maintain a more "cropped" appearance

No Mowing: This will result in a turf whose leaves grow to about six inches (6") in height that will drape over one another to create a low -growing meadow effect. Seedheads about two feet (2') tall will appear in early to mid June, creating a nice meadow effect. The seedheads will typically fall to the ground by late summer, and the lawn will revert to its normal height of about five to six inches.

Late Spring Mowing: Mowing the "No-Mow' lawn once a year in June when the seedheads appear at a height of four (4) to five (5) inches to remove the seedheads and the turf will re -grow to its normal height.

Fall Mowing: This as a good option for seedlings under or in open woodlands. The fescue grasses usually will not form seadhead s when growing in shade, so June mowing is not required to maintain a normal height. However, leaves from deciduous trees must either be raked up and removed, or chopped up with a mulching mower in order to prevent smothering of the turf over winter.

Regular Mowing : For a traditional manicured lawn look, regular mowing can be done every three (3) to four (4) weeks, or when the grass reaches a height of six inches (6"). Most fine fescues do not tolerate close mowing, and should be mowed no lower than 3.5 inches. Never remove more than one third of the total leaf material, or the turf will be damaged. Always cut grass with a sharp mower blade to minimize tearing of the leaves which will cause additional stress to the grass plant.

De-Thatching

Fine fescues tend to develop a thatch layer near the soil surface over time. Thatch is composed of dead grass that does not decompose. It can smother the growth of new grass shoots, reducing the density of the lawn and creating dead spots. The thatch layer also tends to retain moisture at the ground level, which can encourage the growth of fungal diseases. Thatch development is encouraged by high levels of soil Nitrogen, and is more common in rich soils and lawns that are regularly fertilized. If thatch builds up to a point where dead grass is visible and grass begins to thin out, the lawn should be de-thatched.

De-thatching can be accomplished using a mechanical de -thatcher or power rack, or by hand using a de -thatching rake. Set mechanical de -thatchers to a depth where they lift the tha tch without digging up the soil. If the thatch is particularly thick, the de -thatcher will need to be set deeper, and some soil disturbance will likely occur. The thatch should be racked out of the lawn and removed . If open soil is visible following de -thatching, the affected areas should then be over-seeded with "No-Mow" lawn mix.

Timing of de-thatching is very important. Cool season fescue lawns should be de-thatched in mid-spring after the grass has greened up and begun active growth. De-thatching in early spring before the lawn begins to grow tends to encourage weeds.

TEMPORARY WATERING

Temporary watering shall be performed via a temporary above ground irrigation system from the building water supply and/or from water trucks.

A. Seed Mixes with Straw Blanket

1. Immediately after the completion of seeding operations, all seed & blanket areas shall be watered to a depth of two (2) inches. Additional watering shall be performed to a total of fifteen (15) times.

2. During the seed germination period, seeded areas shall be kept moist in the absence of adequate rainfall to a depth of one (1) inch. A fine spray should be utilized to avoid seed bed disturbance/erosion. Watering personnel shall routinely probe the seeded areas in multiple locations to determine moisture levels and the watering program should be adjusted accordingly. A five to ten (5-10) minute watering duration is generally adequate. During the germination period, daily watering may be required during extremely hot periods.

3. Once the seed has fully germinated (not just the cover crop) the watering shall be increased to a two (2) inch depth. The soil should be allowed to dry out between waterings and generally every other day watering during this stage is adequate, depending on rainfall.

C. Plant Material Watering

1. All plants shall receive a thorough watering immediately subsequent to installation including a minimum of four (4) additional waterings when needed.

2. During times of extreme heat, all evergreen and deciduous trees shall receive a minimum of ten (10) gallons of water per tree per watering. Hand injection probe watering or slow release watering bags are the preferred methods for effectively applying water to trees. The use of 20-gallon slow-release irrigation tree bags is highly encouraged and may be substituted for the above mentioned injection waterings. Such watering bags shall be kept operational for a minimum of five (5) continuous days. If this watering method is used in lieu of injection waterings, they shall be provided, as weather conditions dictate, for three (3) watering periods of five (5) continuous days each.

Emergent Plug Mix @ 24" Spacing

Botanical Name	Common Name	%	Quantity
Calamagrostis canadensis	Blue Joint Grass	1.50	261
Carex comosa	Bristly Sedge	5.00	870
Carex lacustris	Common Lake Sedge	2.00	348
Carex lupulina	Common Hop Sedge	1.50	261
Carex stricta	Common Tussock Sedge	2.00	348
Carex trichocarpa	Hairy-fruited Lake Sedge	5.00	870
Carex vulpinoidea	Brown Fox Sedge	5.50	957
Juncus effusus	Common Rush	1.00	174
Leersia oryzoides	Rice Cut Grass	2.00	348
Schoenoplectus acutus	Hardstem Bulrush	1.00	174
Schoenoplectus tabernaemontani	Great Bulrush	3.00	522
Scirpus pungens	Chairmakers Rush	5.00	870
Scirpus atrovirens	Dark Green Rush	1.00	174
Scirpus cyperinus	Wool Grass Rush	2.00	348
	Grass/Sedge/Rush Subtotal	**37.50**	**6527**
Acorus calamus	Sweet Flag	3.00	522
Alisma subcordatatum	Mud Plaintain	1.00	174
Asclepias incarnata	Swamp Milkweed	3.00	522
Eutrochium maculatum	Spotted Joe Pye Weed	2.00	348
Hibissus moscheutos	Swamp Rosemallow	3.00	522
Iris virginica shrevei	Blue Flag	12.00	2088
Lobelia cardinalis	Cardinal Flower	2.00	348
Lycopus americanus	Waterhorehound	1.50	261
Lythrum alatum	Winged Loosestrife	2.00	348
Mimulus ringens	Monkey Flower	3.00	522
Pontederia cordata	Pickerelweed	2.00	348
Sagittaria latifolia	Common Arrowhead	13.00	2263
Solidago riddellii	Riddle's Goldenrod	2.00	348
Sparganium eurycarpum	Great Bur Reed	13.00	2263
	Wildflower Subtotal	**62.50**	**10878**
	SEED MIX TOTAL	**100.00**	**17404**

THREE-YEAR MANAGEMENT PERIOD ACTIVITIES

1. The work consists of the Contractor conducting routine ecological management activities during the three-year management and monitoring period in the naturalized planting areas as shown on the landscape plan to assist the Contractor in meeting required performance standards.

2. During the first two (2) growing seasons of the three-year period the Contractor shall high-mow the vegetation within the Native Seed Mix Zone several times during the growing season to ensure the vegetation does not exceed eighteen inches (18") in height. A rotary or flail type mower shall be used. During high-mowing, the vegetation shall be cut no lower than 6 to 9 inches so the native seeding are unharmed. Selective weed whipping can also be used if conditions are unfit (i.e., too wet) for a tractor, or if only small isolated areas of vegetation required cutting. In addition, cutting the inflorescence prior to seed set of many biennial species including teasel and sweet clover is an effective control method that can be utilized.

3. The Contractor shall conduct chemical and/or mechanical weed control activities in all of the naturalized seeded areas for a three-year period following planting/seeding. The Contractor shall conduct four annual weed control application periods (total of twelve (12) for the three-year period). The Contractor is responsible to achieve a 95% kill of reed canary grass, purple loosestrife, thistle and common reed and 80% kill of other problematic, nuisance species to successfully complete each of the application periods specified below.

   a. Application Period One (early spring): problematic species such as, but not limited to, reed canary grass, red/white cover, cattails.
   b. Application Period Two (late spring to mid-summer): problematic species such as, but not limited to, reed canary grass, while/yellow sweet cover, cattails, wild carrot, purple loosestrife and common reed.
   c. Application Period Three (mid to late summer): problematic species such as, but not limited to, reed canary grass, ragweed, cattails, purple loosestrife and common reed.
   d. Application Period Four (late summer to early fall): problematic species such as, but not limited to, reed canary grass, red/white cover, common reed.

4. Natural regeneration of cattails in the stormwater management facilities will likely occur following construction. As required by these planting specifications pre-planting weed control will be conducted if any problematic species are present. As for cattails, hand pulling cattails can be conducted when the cattails are small enough to ensure that the entire root is removed. Off-site disposal of cattails will be required. Larger cattails will require herbicide applications. Aggressive cattail control will be required after planting throughout the three-year management period to ensure plant establishment. After planting the hand-wick application method to control cattails shall be required.

5. If permitted, the Contractor shall conduct a prescribed burn in the prairie areas during the third growing season. The Contractor shall obtain all the required burn permits from the Illinois Environmental Protection Agency, City or Village, and local fire protect district and prepare all necessary documents required for the permit including a Burn Plan.

6. If planted, the Contractor shall irrigate all plant plugs as needed to achieve the survivorship requirements.

7. If installed, the Contractor shall remove and dispose of all planting enclosures during the second year of the management period.

8. Payments: The portion of the cost allocated for the three (3) year maintenance program will be released seasonally over the three (3) year period only if the Contractor provides an annual cost breakdown for the three (3) year period. Annual releases under this scenario will be as follows:

Period	*Release Date*
1st (full) growing season	45 days subsequent to receiving the required annual report
2nd growing season	45 days subsequent to receiving the required annual report
3rd growing season	45 days subsequent to performing the required burn

INSPECTION & REPORT

1. The Contractor or Subcontractor responsible for the maintenance shall conduct an annual inspection and written report at the end of each growing season for the duration of the maintenance period to the Owner. The report shall summarize the findings of the inspection with respect to the coverage and development of the permanent plantings including a list of species identified and a program for any required remedial action regarding weed control, erosion, etc. This report shall be submitted to the Owner by December 31st of each year.

2. The naturalized stormwater basins and/or other natural areas installed by the Contractor will be monitored and managed annually for three years by the Contractor to ensure successful plantings. Data collection will be conducted utilizing meander survey methodology. The meander survey will identify species encountered, dominate species within each plant community, and identify areas that require management. Success of the planted areas will be evaluated based on the following performance criteria.

PERFORMANCE CRITERIA

1. Within three (3) months of seed installation, at least 90% of the seeded area, as measured by aerial coverage, shall be vegetated. A minimum 90% vegetative coverage shall be maintained throughout and at the end of the three-year maintenance period for these areas. This standard does not apply to wetland plug areas (if planted).

2. At the end of the second growing season, a minimum of 75% vegetative coverage in the wetland plug area(s) shall be achieved and maintained throughout the end of the three-year maintenance period (if planted).

3. The stormwater management facilities shall not contain any rills greater than four inches (4") deep throughout and at the end of the three-year maintenance period.

4. At the end of the second and third growing seasons, no area greater than 1.0 square meters on slope areas shall be devoid of vegetation.

5. At the end of the second growing season, 30% seed mix presence for the prairie seed mix areas shall be achieved. At the end of the third growing season 50% seed mix presence for the prairie seed mixes shall be achieved.

6. At the end of the third growing season, the top three dominate species based on aerial coverage shall NOT be non-native species, cattail or reed grass

7. Relative coverage (determined by ocular estimation) of cattail shall be less than 10% throughout, and at the end of the three-year maintenance period.

8. Relative coverage (determined by ocular estimation) of common reed, reed canary grass, and loosestrife in aggregate shall be less than 5% throughout, and at the end of the three-year maintenance period.

9. Relative coverage (determined by ocular estimation) of thistle and teasel shall be less than 5% throughout, and at the end of the three-year maintenance period.

10. Plugs (if planted) must achieve 90% survivorship one (1) year from plant installation.

The Contractor shall water plant plugs (if planted) as needed in order to meet the performance criteria. The cost to irrigate is incidental to the contract and shall be included in the Contractor's bid price. The Contractor shall also perform vegetative management for three years following planting as specified under the section "Three-year Monitoring and Reporting Activities' to assist with meeting the Contractor Performance Criteria. If performance criteria are not achieved, Contractor is responsible to conduct additional activities, which may include supplemental seeding, supplemental planting and additional years of vegetation management to rectify areas at no additional cost to the Owner to achieve performance.

LONG-TERM MANAGEMENT ACTIVITIES

1. Following competition of the initial Three-year maintenance program the following Long-term maintenance shall be performed on a regular basis:

a. Prescribed burning will be performed every one to three years for established native prairie plantings and naturalized detention basins. Burning requires a permit from the Illinois EPA and notification of the local fire district and the Village of Palatine.

b. Late fall or early winter mowing to a height of six to twelve inches (6"-12"), with the removal of hay and debris, will be performed in alternate years where burning is not practical or conditions are not conductive to burning.

c. Applications of herbicide to control invasive will be required if burning or mowing does not control or eliminate said problematic or nuisance species. Those species shall include, but not limited to, reed canary grass, purple loosestrife, cattail, thistle and common reed. All herbicide applications shall be performed by a certified and licensed applicator. Herbicides shall be non-toxic to animals and aquatic life and will be applied in an appropriate manner to prevent the killing of desirable native species.

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REVISIONS

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

IRG Ives/Ryan Group, Inc.
1741 S. WIESBROOK ROAD
WHEATON, IL 60189
PHONE: 630.738.0726

Landscape Architecture
Park & Recreation Design
Site & Community Planning
www.ivesryangroup.com

NATIVE LANDSCAPING

PROJECT NO.: L920 JOB NO.: 9224A

DATE: 02/05/21
SCALE: noted
PLANNER: RM
DRAWN BY: RM
CHECKED:

SHEET L-3

Attachment: Final Landscape Plans (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PLANT MATERIAL

PART 1 - GENERAL

1.1 SCOPE OF WORK

The work includes furnishing of all materials, and the performance of all operation in connection with the planting of deciduous & evergreen trees, deciduous & evergreen shrubs, shrub roses, perennials, ornamental grasses, groundcover, bulbs (if any) and annual flowers (if any) in strict conformance with the project specifications and applicable drawings which are subject to the terms and conditions of the Contract.

1.2 GENERAL REQUIREMENTS

All plant material shall comply with the State of ILLINOIS and FEDERAL laws with respect to inspection for plant diseases and insect infestation. An inspection certificate required by law to this effect shall accompany each shipment. The Landscape Architect reserves the right to inspect the plant material at the place of growth but such inspection shall not preclude the right of rejection at the site.

1.3 APPLICABLE STANDARDS

A. *American National Standards for Tree Care Operations*, ANSI A300, American National Standards Institute, 11 West 42nd Street, New York, N.Y. 10036.
B. *American Standard for Nursery Stock*, ANSI Z60.1, American Nursery & Landscape Association, 1000 Vermont Avenue NW, Suite 300, Washington, D.C. 20005.
C. *Hortus Third*, The Staff of the L.J. Bailey Hortorium, 1976, MacMillan Publishing Co., New York.
D. All standards shall include the latest additions and amendments as of the dated of advertisement for bids.

PART 2 - MATERIALS

2.1 GENERAL
The Landscape Architect reserves the right to tag or inspect plants at the nursery but such inspection shall not preclude the right of rejection at the site. Contractor shall furnish and install all plants as shown on the drawing and in the quantities as actually designated on the drawings. The quantities shown on the plant list are included for convenience purposes only.

2.2 NOMENCLATURE
The names of the plants indicated on the drawings conform generally with those accepted in the nursery trade.

2.3 QUALITY AND SIZE
Plants shall have a habit of growth that is normal for the species and shall be sound, healthy, vigorous, and free from insect pests, their eggs or larvae, plant diseases, and injuries. All plants shall be nursery grown under climatic conditions similar to those which exist in the locality of the site for at least two (2) years and equal or exceed the measurements specified in the plant list. They shall be measured before pruning with branches in normal position. All necessary pruning shall be performed only at the time of planting. Trees will not be accepted which have their leaders cut or which have their leaders damaged so that cutting is necessary. Plants larger in size than specified may be used with the approval of the Landscape Architect but the use of larger plants will make no change in the contract price. Requirements for the measurement, branching, quality, balling, and burlapping of plants on the plant list shall follow the Code of Standards (Z60.1-most current edition) by the AMERICAN NURSERY & LANDSCAPE ASSOCIATION, formerly known as the AMERICAN ASSOCIATION OF NURSERYMEN, INC. All plant material with shriveled dry roots or which does not comply with the specifications will be rejected. All shrubs shall be at least twice transplanted and must have a fully developed fibrous root system typical of the stated species. All shrubs must be freshly dug immediately before shipping unless they are containerized. Pre-dug, healed-in plants may be considered only in special cases involving planting during the hot months between the spring and fall planting seasons. Use of such material will be allowed only upon the approval of the Landscape Architect and is subject to his inspection prior to said approval.

2.4 DELIVERIES
The Contractor shall take all precautions that are demanded by good trade practice to insure arrival of the plant material at the stated delivery point in good condition and without injury of any nature. Plants shall be covered properly to prevent drying, transit disease, or injury.

2.5 TEMPORARY STORAGE
Insofar as it is possible, plant material shall be planted on the day of delivery. In the event this is not possible, the Contractor shall protect the unplanted stock from sun and drying winds at all times. All balled and burlapped plants shall be shaded from the sun, have their ball set off the ground and healed in with sawdust, peat, soil or other moisture-holding material and shall be kept moist. Plants should not remain unplanted for longer than three (3) days if in leaf. On-site storage shall be only in area(s) designated by the Owner.

2.6 SUBSTITUTIONS
Substitutions may be permitted only upon submission of written proof that the specified plant is not obtainable locally. Such substitution may be made only upon authorization by the Landscape Architect.

2.7 SELECTION
All plants shall be obtained from nurseries licensed by the State of Illinois and approved by the Landscape Architect. The Landscape Architect reserves the right to accompany the Contractor to the nurseries for the purpose of selecting (tagging) material. Plant sources located outside the State of Illinois must be approved by the Landscape Architect.

2.8 TOPSOIL
Topsoil if needed shall be imported. All imported topsoil, used for any portion of the work, shall be fertile, friable, natural loam containing a liberal amount of humus. It shall be relatively free from weeds, large roots, plants, sticks, stones larger than one (1) inch, waste, debris or other extraneous matter. The installing Contractor shall be responsible for rock picking and/or debris removal as needed to meet this specification.

The soil, to be acceptable topsoil, shall meet the following criteria:
A. ORGANIC MATTER: Not less than 1.5 percent no more than 10.0 percent.
B. pH: No lower than 5.0 nor higher than 8.0.
C. TEXTURE: No more than 25 percent clay.
D. SOLUBLE SALT: No more than 1000 ppm
E. CHEMICAL ACTIVITY: The topsoil (on-site & imported) shall be free from any toxins or chemical residue which could result in any form of plant growth damage.

The Contractor shall provide a soil analysis report submittal containing test results and soil scientist recommendations based on a minimum of one (1) sample taken from each proposed imported topsoil stock pile. The testing shall cover macro nutrients and pH, soluble salts, organic content/mechanical analysis and Bio assay.

2.9 MULCH
Mulch shall consist of the following:

A. MUSHROOM COMPOST
Mushroom compost shall be composed of well-rotted cattle or stable manure with an admixture of 15-30% topsoil and shall have been used for the commercial growing of at least one (1) crop of mushrooms.
B. SHREDDED HARDWOOD BARK (general mulching)
Shredded hardwood bark shall consist of finely shredded hardwood bark, free of sticks and leaves.

2.10 FERTILIZER & NUTRIENTS

Fertilizer shall be commercial fertilizer which shall be a complete fertilizer with the following approximate analysis:

A. Shrubs
Woodace (14-3-3) slow-release briquettes or acceptable equivalent approved by Landscape Architect.
B. Roses
1. Woodace (14-3-3) slow-release briquettes
2. Superthrive liquid or acceptable equivalent approved by Landscape Architect.
C. Perennials, Groundcover, Ornamental Grasses & Vines
Osmocote (18-6-12) 8-9 month controlled release, or acceptable equivalent approved by the Landscape Architect.
D. Annual Flowers
Osmocote (14-14-14) 3-4 month controlled release or acceptable equivalent approved by the Landscape Architect.
E. Bulbs
Holland Bulb Booster (9-9-6) or acceptable equivalent approved by the Landscape Architect.
F. Deciduous & Evergreen Trees
No fertilizer required

2.11 TREE WRAPPING MATERIAL

A. Wrap shall be - Breathable synthetic fabric tree wrap. White in color, delivered in 75 mm (3 in.) wide rolls. Specifically manufactured for tree wrapping. Tree wrap shall be "Breathable Fabric Tree Wrap" as manufactured by the Dewitt Company, Inc., Sikeston, MO, or approved equal. Submit manufacture literature for approval.
B. Tape for securing the wrap shall be bio-degradable tape suitable for nursery use and which is expected to degrade in sunlight in less than two (2) years after installation.

2.12 WATER

Potable water shall be supplied by the Owner at no cost to the Contractor by way of an irrigation system, quick coupler system, hose bibs, hydrant meter or a designated fill-up source on site.

PART 3 - EXECUTION

Planting operations shall be conducted under favorable weather conditions during the season stated in the Contract. Before excavations are made the surrounding turf (if existing) shall be covered in a manner that will satisfactorily protect all turf areas that are to be trucked or hauled over and upon which soil is to temporarily stocked. The Contractor shall be responsible for the restoration of all damaged existing turf. All restoration shall be sodded.

3.1 TIME SCHEDULE OF PLANTING OPERATION

Landscaping shall be performed during the season or seasons which are normal for such work as determined by weather conditions and by accepted practice. Planting may be performed under unseasonable conditions without additional compensation, but such work must have the prior approval of the Landscape Architect and/or Owner in writing as to the time of work and methods of operations. Approval to plant under such conditions shall in no way relieve the Contractor form the guarantee provisions of these specifications.

PLANTING SEASON	ACCEPTABLE TIME PERIOD
1. SPRING	a. From time soil is workable to June 15 with the following exception:
1) Bare root materials (if any) shall cease on May 31	
2. FALL	a. Sept. 1 to Nov. 15 with following exceptions:
1) Evergreen Shrub planting to cease Oct. 31	
2) Evergreen Tree planting to cease Oct. 15	
3) Perennial & Ornamental Grass planting to cease Oct. 15	

3.2 **WATERING**

All plants shall receive a thorough watering immediately after installation. During times of extreme heat, all evergreen and deciduous trees shall receive a minimum of 10 gallons of water per tree per watering up to two (2) additional waterings shall be performed as needed. The use of drip irrigation tree bags are encouraged (e.g., gatorbags). All additional waterings will be performed by the Owner or in accordance with a Change Order per the Supplemental Bid prices for additional watering.

3.3 MAINTENANCE
Maintenance shall be performed by the Contractor as follows:

A. TEMPORARY MAINTENANCE
The Contractor shall be responsible for the total maintenance of all plant material until such a date as all landscape operations have received Preliminary Acceptance. Temporary maintenance shall begin immediately after each plant is installed and shall include up to three (3) waterings, and all necessary cultivation, weeding, pruning, disease and insect pest control, protective spraying, resetting of plants to proper grades or upright position, restoration of damaged planting saucers, and any other procedure consistence with good horticultural practice necessary to insure normal, vigorous, and healthy growth of all work under this Contract. Upon the Preliminary Acceptance of all planted areas, the responsibility for plant maintenance rests solely with the Owner, with the following exceptions.

B. CONTINUED MAINTENANCE
For the duration of the guarantee period the Contractor shall be responsible for the resetting of settled plants, the straightening of plants which are not plumb and the tightening of tree guys (if utilized). All other maintenance is the responsibility of the Owner. However, it is the Contractor's responsibility to occasionally inspect the quality of the Owner's maintenance.

3.4 ACCEPTANCE

A. PRELIMINARY PLANTING ACCEPTANCE
Preliminary planting acceptance shall be given for completed planting operations for the purpose of the Contractor becoming eligible for payment for this portion of the Contract work. In order to obtain Preliminary Acceptance, the Contractor shall notify the Owner and/or Owner's Representative by phone or in writing at the conclusion of all planting operations so that preliminary acceptability by way of a field inspection can be performed. In order for an area to be accepted on a preliminary basis, it shall conform to the following:
1. All plant material shall be in conformance with the Drawings with respect to quality, size, species and location, except those items accepted or revised in the field by the Landscape Architect.
2. All plant material shall be in a healthy condition, as defined under the guarantee requirements stated below in Section 3.14

B. FINAL PLANTING ACCEPTANCE
Final planting acceptance shall be granted after the completion of all replacement operations required fulfilling the guarantee stated below. On or about the expiration of the one-year (1 year) guarantee, a follow-up inspection will be made by the Owners and/or Owner's Representative to determine replacements required to be made by the Contractor in accordance with the provisions of these specifications. The inspector will document his/her findings in a field report. Upon completion of the replacement program, the Owner and/or Owner's Representative shall conduct an inspection to determine the acceptability of the required replacements. If all is found to be acceptable as defined by Item A above, the Contractor and the General Contractor shall be notified in writing of his final acceptance of work.

3.5 GUARANTEE
The Contractor shall guarantee for a period of one (1) year the replacement of any permanent plant which has died, or is in a dying condition, or which has failed to flourish in such a manner that its usefulness or appearance has been impaired. Any tree with a dead main leader or with a crown which is twenty-five percent (25%) or more dead shall be replaced.
These guarantees shall be in accordance with the following:

A. ONE YEAR PERIOD
The one (1) year period shall begin on the date of Preliminary Acceptance of all plant material.
B. REPLACEMENTS & DAMAGES
The decisions of the Owner and/or Owner's Representative for required replacements shall be conclusive and binding upon the Contractor. The Contractor shall also be responsible for repairing damage to persons and property also caused by defective workmanship and materials.
C. EXCLUSIONS
The Contractor shall not be liable for the replacement of plants which were damaged by animals, by deicing compounds, fertilizers, pesticides or other materials not specified by the Contract documents or not applied by him under his supervision, by relocating or removal by others, by Acts of God, by vandalism or by terrorism.
D. GUARANTEE PERIOD INSPECTION
During the guarantee period, the Contractor shall, from time to time, inspect the watering, cultivation, and other maintenance operations carried on by the Owner with respect to such work, and promptly report to the Owner any methods, practices or operations which he considers unsatisfactory, and not in accord with his interests or good horticultural practices. The failure of the Contractor to so inspect or report shall be construed as an acceptance by him of the Owner's maintenance operations, and he shall not thereafter claim or assert that any defects which may later develop are the result of such methods or practices or operations.

TURF GRASS

PART 1 - GENERAL

1.1 SCOPE OF WORK

The work includes finish grading, furnishing fertilizer, seed and/or sod as specified and performance of all operations in connection with seeding and/or sodding in strict accordance with the applicable Drawings and subject to the terms and conditions of the Contract.

1.2 EQUIPMENT

The Contractor shall provide and maintain equipment suitable for the execution and completion of the work specified in accordance with (IDOT) Standard Specifications. All equipment shall be operated by personnel trained in the operation of such equipment.

PART 2 - PRODUCTS

2.1 TOPSOIL

Topsoil for planting operations shall be obtained from an on-site stockpile generated from site stripping. In the event that none is available, needed topsoil shall be imported from an off-site source. All imported topsoil, used for any portion of the work, shall be fertile, friable, natural loam containing a liberal amount of humus. It shall be relatively free from weeds, large roots, plants, sticks, stones larger than one (1) inch, waste, debris or other extraneous matter. The installing Contractor shall be responsible for rock picking and/or debris removal as needed to meet this specification.

The soil, to be acceptable topsoil, shall meet the following criteria:

1. ORGANIC MATTER: Not less than 1.5 percent no more than 10.0 percent.
2. pH: No lower than 5.0 nor higher than 8.0.
3. TEXTURE: No more than 25 percent clay.
4. SOLUBLE SALT: No more than 1000 ppm.
5. CHEMICAL ACTIVITY: The topsoil (on-site & imported) shall be free from any toxins or chemical residue which could result in any form of plant growth damage.

The Contractor shall provide a soil analysis report submittal containing test results and soil scientist recommendations based on a minimum of one (1) sample taken from each proposed imported topsoil stock pile. The testing shall cover macro nutrients and pH, soluble salts, organic content/mechanical analysis and Bio assay.

2.2 COMMERCIAL FERTILIZER AND DELIVERY

Fertilizer shall be delivered to the site in unopened, original containers, each bearing name and address of the manufacturer, name brand, or trademark, and manufacturer's guaranteed analysis. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable to use, will not be accepted. Fertilizer shall not have been exposed to weather prior to delivery on the site and after delivery until used. It shall be completely protected at all times and shall not be stored in direct contact with the ground.

A. FERTILIZER STRENGTH
The fertilizer shall be a complete fertilizer containing a minimum basis percentage by weight of the following:
1. PRIOR TO SEEDING AND/OR SODDING 6-24-24
Nitrogen..... 6%
Phosphorous..... 24%
Potash..... 24%

2. AFTER SEEDING AND/OR SODDING 18-5-9
Nitrogen..... 18%
Phosphorous..... 5%
Potash..... 9%

a) One-quarter of the nitrogen shall be in the form of nitrates, one-quarter in the form of ammonia salts, and one-half in the form of organic nitrogen.
b) Available phosphoric acid shall be derived from super-phosphate having a minimum guaranteed analysis of 20% of available phosphate.
c) The potash shall be in the form of sulphate of potash.

The balance of the fertilizer shall be made up of materials usually present in such a product. It shall be free from dust, sticks, sand, stone, or other debris.

2.3 GRASS SEED (if specified)
Grass seed shall be reclaimed seed of the previous season's seed crops. All seed shall meet requirements established by the State and Federal Seed and Weed Controls Laws. The grass seed mixture shall be composed of the following grass seeds mixed in proportions by weight and shall meet or exceed the minimum percentages of purity and germination as indicated.

PROPORTION BY WEIGHT	TYPE OF GRASS
1. CONVENTIONAL TURF GRASS MIX (if specified)	
60%	KENTUCKY BLUEGRASS (blend of 3 cultivars)
30%	PERENNIAL RYEGRASS (blend of 2 cultivars)
10%	CREEPING RED FESCUE (Apply at 7 lbs./1,000 S.F. for mechanical seeding)
2. SALT TOLERANT MIX (if specified)	
40%	FULTS' ALKALI GRASS (PUCCINELLIA DISTANS)
30%	CREEPING RED FESCUE
20%	KENTUCKY BLUEGRASS
10%	PERENNIAL RYEGRASS (Apply at 5 lbs./1,000 S.F. for mechanical seeding)

The percentage of hard seed included as a part of the germination percentage of any lot of seed, shall not exceed twenty. Kentucky bluegrass seed shall weigh a minimum of 28 pounds to the nearest measured bushel. Weed seed content shall not exceed 0.25%.

1. PACKING AND MARKETING

All seeds shall be delivered in suitable bags in accordance with standard commercial practice. Each bag shall be tagged or labeled as required by the law of the STATE OF ILLINOIS. The vendor's name shall show on or be attached to each bag together with a statement signed by the vendor showing: a) the kind of seed contained, b) the percentage of purity and germination, c) the percentage of hard seed, if any, d) a statement conforming to the laws of the STATE OF ILLINOIS hereinbefore mentioned showing percentage of weed seeds, if any. Seed which has become wet, moldy, or otherwise damaged will be rejected.

2.4 EROSION CONTROL BLANKET

1. STRAW BLANKET (if specified)
a. S-75 Straw Blanket (North American Green)
b. AEC Premier Straw Blanket (American Excelsior Company)
c. or equivalent

2. STRAW/COCONUT BLANKET (if specified)
a. S-75 Straw Blanket (North American Green)
b. AEC Premier Straw Blanket (American Excelsior Company)
c. or equivalent

2.5 HYDROMULCH (if specified)
SoilCover Hydraulic Wood Mulch by Profile distributed by ERO-TEX (866)437-6839

2.6 SOD (if specified)
Sod shall comply with State and Federal laws with respect to inspection for plant diseases and insect infestation. It shall be fresh cut, live, nursery grown sod, not less than one and one half (1 1/2) inches thick having well-matted roots. The root zone shall be of good, fertile, natural mineral soil free from stones and debris. Peat sod will not be acceptable. The turf shall contain no bent or quack grass nor any other noxious weed growth. It shall be of firm tough texture having a compact growth of grass. The sod sections shall be standard in size (24 inches wide x 3 feet in length) and each section shall be strong enough to support its own weight and retain its size and shape when suspended vertically from a firm grasp on the upper ten (10%) percent of the section.

Before being cut and lifted, the sod shall have been mowed at least twice with a lawn mower and the final mowing not more than seven days before the sod is cut. Sod which is not placed within 48 hours of cutting shall not be used without the approval of the Owner and/or Landscape Architect.

The Owner and/or Landscape Architect, reserves the right to inspect the sod at the source before cutting and areas that fail to meet with his approval shall not be cut for the purpose of supplying material under the contract. The Owner and/or Landscape Architect shall be permitted to take such samples as he may select. All sod shall be fresh and green when placed. Any sod that is dried out, burned, inferior in quality to said samples, or in any way failing to meet the requirements of these specifications will be rejected and the Contractor shall immediately remove such rejected material from the premises of the project and supply suitable material in its place.

1. BLUEGRASS SOD shall be a blend of at least three (3) cultivars of Kentucky bluegrass grown on a mineral base.

2. SALT SOD (if specified) shall be a blend of Kentucky Bluegrass, 'Fults' Alkalie Grass (Puccinellia Distans), Perennial Ryegrass and other types as approved by the Landscape Architect grown on a mineral base.

2.7 WATER

The Owner shall provide at no cost, sufficient water for the Contractor to maintain plant materials and seeded and sodded areas in accordance with the requirements of the applicable technical specifications. Potable water shall be supplied by the Owner by way of a permanent underground irrigation system, quick coupler system, hose bibs, fire hydrants or a designated fill-up source for mobile tanks. When water is provided by way of fire hydrants, it shall be the Contractor's responsibility to be completely familiar with all local ordinances concerning the use of this water source. If a meter is required, it is the Contractor's responsibility to obtain, store and return the meter. All fees incurred by the Contractor in obtaining the meter and utilizing the water supply will be reimbursed to him by the Owner.

In the event that the on-site water supply is curtailed or terminated by the Owner or by ordinance during the period the Contract is in effect, or that there is no on-site sources of water, the Contractor shall supply water from off-site in sufficient quantities to complete the job. Compensation for this additional item will be in accordance with a solicited price quote. If authorization to supply off-site water is not given to the Contractor by the Owner, when the Owner is unable to supply the water in sufficient quantities, the Contractor shall not be left responsible for damage to new plantings (plant materials & sod) or failure of seed to germinate and grow caused a direct result of an inadequate water supply.

PART 3 - EXECUTION

3.1 SEED - The accepted seasons for sowing seed in lawn areas shall be defined as follows:

PLANTING SEASONS	SPRING	FALL
Turf grass	April 1 * to May 31	Aug. 15 to Sept. 30

* or as soon as the soil is free of frost and in a workable condition.

Seeding during other time periods shall require the approval of the Owner and/or Landscape Architect. All sowing of seed shall be completed after all trees and shrubs have been installed, if any.

3.2 SOD - The accepted seasons for laying sod shall be as follows:

1. SPRING SODDING shall be performed from the time the soil becomes workable and unfrozen sod becomes available to June 15.
2. FALL SODDING shall be performed from August 15 to October 31.

Sodding during the summer season, defined as June 16 to August 14, will be acceptable if the area is served by an operational irrigation system. Sodding after November 1 shall be considered unseasonable and will require the approval of the Landscape Architect or Owner.

3.3 REQUIRED MAINTENANCE

The Contractor shall be responsible for maintaining all newly seeded and sodded areas until such a time as these areas are granted acceptance by the Owner and/or Landscape Architect. Maintenance during this time period shall and consist of watering, mowing, fertilization and herbicide application, as well as any other horticultural practices necessary to establish an acceptable stand of grass.

A. WATERING

1. The Contractor shall water all newly **seeded** areas once immediately upon completion. Additional watering shall be performed as needed in the absence of adequate rainfall. All water should be applied as a spray or dispersion to prevent run-off or damage. The Contractor shall be responsible for watering until turf is established and accepted. If the Owner supplies an in-ground irrigation system, the Contractor shall be responsible for monitoring the effectiveness of the system and shall report any problems with the system to the Owner immediately, followed up in writing. If the Owner does not provide an irrigation system, then additional watering shall be performed in accordance with the Supplemental Bids where alternate watering prices shall be quoted. If this work item is not included as part of the original Contract, it must be authorized. Compensation shall be in accordance with the Supplemental Bid Prices. If the Owner fails to supply water or authorize supplemental watering the Contractor's warranty for providing an established stand of turf will be voided.

2. The Contractor shall water all newly installed **sod** immediately. The Contractor shall remain responsible for watering through three (3) applications. If the Owner supplies an in-ground irrigation system included in the scope of these improvements, the Contractor shall be responsible for monitoring the effectiveness of the system and shall report any problems with the system to the Owner immediately, followed up in writing. If the Owner does not provide an irrigation system, then additional watering shall be performed in accordance with the Supplemental Bids where alternate watering prices shall be quoted. If this work item is not included as part of the original Contract, it must be authorized. Compensation shall be in accordance with the Supplemental Bid Prices. If the Owner fails to supply water or authorize supplemental watering the Contractor's warranty for providing an established stand of turf will be voided. Watering after the required three (3) waterings shall be the responsibility of the Owner, or in accordance with authorized supplemental watering.

B. MOWING

1. The Contractor shall mow all **seeded** areas three (3) times. The three (3) mowings shall be performed once the turf has reached a height of three inches (3") and shall maintain the turf at 2-2½". At no time should more than 1/3 of the leaf blade be removed by any mowing.

2. The Contractor shall mow all **sodded** areas once. The one (1) mowing shall be performed once the turf has reached a height of three inches (3"). At no time should more than 1/3 of the leaf blade be removed by any mowing.

C. FERTILIZATION

1. **Seeded** areas after completion of the second required mowing, the Contractor shall apply an 18-5-9 commercial fertilizer at the rate of 15 pounds per 1,000 square feet (650 lbs/ac.) to all turf areas using a mechanical spreader and by making two (2) passes at right angles to each other.

2. **Sodded** area after completion of the required mowing, the Contractor shall apply an 18-5-9 commercial fertilizer at the rate of 15 pounds per 1,000 square feet (650 lbs/ac.) to all turf areas using a mechanical spreader and by making two passes at right angles to each other.

D. HERBICIDE

The Contractor shall be responsible for one (1) application of a weed control product no sooner than the second mowing with the areas seeded. The product shall reflect the specific weed problem which may exist.

3.4 ACCEPTANCE

Acceptance of seeded areas will be determined by the Owner and/or Landscape Architect.
Acceptance shall be granted upon conformance with the following:
1. Grass shall display a reasonably uniform distribution of grass plants.
2. Grass shall display vigorous growth and be green and healthy in appearance.
3. Grass shall have received the required mowings, fertilization and herbicide application.

The Contractor shall not be held liable for damage incurred to the seed areas caused by deicing compounds, toxic substances, fertilizers, pesticides and other materials not specified or not applied by him or under his supervision, nor those damages caused by vandalism or acts of nature.

3.5 GUARANTEE

The Contractor shall guarantee the provision of a green, healthy relatively weed free turf at the time of acceptance.

PRAIRIE SEEDING

- Economy Prairie Seed Mix
- Wet/Mesic Seed Mix
- Wetland Edge Seed Mix
- Stormwater Seed Mix

Seed Bed Preparation

1. The Contractor shall remove stones, roots and sticks prior to seedbed preparation activities and kill any existing vegetation. All debris shall be disposed of off-site.

2. The Contractor shall prepare the seedbed with a unique rack or harrow to create a smooth level seedbed. The seedbed preparation activities shall reduce clod size to a minimum diameter of 2-inches and eliminate rivulets, gullies, crusting and caking. Working wet soils shall not be conducted. Following these seedbed preparation activities, the ground surface shall have minimum compaction, be smooth and level, and be free of debris to promote good seed to soil contact.

Seeding Specifications

1. The Contractor shall furnish, transport, and install all seed mixes in the areas specified on the Landscape Plan

2. Prairie seeding activities shall be performed after the seedbed has been properly prepared. Spring seeding shall occur between April 15 and June 15. Fall dormant seeding shall be conducted no earlier than November 1 and after the first frost and until the depth exceeds 1 inch.

3. The Contractor shall notify the Owner and/or the Owner's Agent 24 hours prior to planting.

a. Installation of specified seed mixtures shall be performed using a native seed drill and tractor mounted broadcast spreader. The seeding shall be conducted in the following manner with the drill installation conducted before the broadcast installation:

i. All of the seed oats, seventy-five percent (75%) by weight of the native grasses and twenty-five (25%) by weight of the forbes shall be installed with a native seed drill. This seed shall be buried to a 1/8-inch depth.

ii. Following drill seeding the remaining twenty-five percent (25%) and seventy-five percent (75%) of the forbes all shall be sown with a tractor mounted broadcast spreader. Additional oats can be added during the broadcast seeding if needed to improve metering of the seed mix.

4. All seed sources shall be within a 200-mile east-west radius and a 100-mile north-south radius of the site. Seeds shall be true to name and variety and have proper stratification and/or scarification to break dormancy for the appropriate planting seasons. Proof of origin shall be presented to the Owner and/or the Owner's Agent at the site prior to any seeding application. Seed mixes shall be supplied in pounds of Pure Live Seed (PLS). Purity and germination tests no older than twelve (12) months must be submitted for all seed supplied to verify quantities of bulk seed required to achieve the pounds of PLS specified. All species (grasses, sedges and forbes) will be supplied at 100% PLS. Seed not compliant with PLS requirements will be augmented with additional quantities in order to compensate for lack of viability and achieve specified amounts of PLS.

5. Installation of Wetland Seed Mix, Emergent Wetland Seed Mix and/or Stormwater Seed Mix (if specified) shall be performed with a tractor-mounted or ATV mounted broadcast spreader to ensure seed is placed on top of the ground surface (i.e. surface seeding). If the seeding area is too small or wet for a tractor (ATV), seed installation shall be hand-seeded or hydro-seeded using a hydraulic seeder. For hydro-seeding, the seed shall be installed with water only. Hydromulch shall not be mixed with the seed during the seed installation. APPROVAL from the Owner and/or the Owner's Agent is required prior to any hydraulic seeding.

6. The Contractor shall furnish seeds of specified local origin, hardy under the climate conditions at the project site, free of insects and diseases, and having the appearance of health, vigor, and habit normal for the species. Comply with applicable state and federal laws regarding inspections. All regulations applicable to the seed mix and landscape materials shall be followed.

7. The Contractor shall examine the grade, verify the elevations and water levels, observe the conditions under which work is to be performed, and notify the Owner and/or the Owner's Agent of unsatisfactory conditions. Proceeding with the work constitutes acceptance of existing conditions, including current water levels and soil conditions.

8. Seed shall not be sown during high winds or when the seedbed is not in the proper condition for seeding. Prior to starting work, calibrate all seeding equipment and adjust sow seed at the proper seeding rate. Operate equipment to ensure complete coverage of the entire area to be seeded.

9. Prior to installation, the Owner and/or Owner's Agent shall review any species substitutions and reserves the authority to deny use of any species if deemed inappropriate for the site.

10. All seed material shall be subject to inspection by the Owner and/or Owner's Agent prior to installation.

11. Contractor shall provide the Owner and/or Owner's Agent copies of all seed labels.

12. Seeding shall only occur in areas that will received the specified erosion control measures within 48 hours of seeding provided rain is not imminent. If rain is imminent, erosion control measures shall occur on the same day as seeding.

Erosion Control

1. Following seeding erosion control measures shall be completed within all newly seeded areas as shown on the Landscape Plan. If blankets are specified they shall be installed with staples following the manufacturer's specifications.

CONTAINER PLANTS

- Emergent Aquatic Plugs

Site Preparation

1. The bottom of the stormwater facility(s) shall be free of any actively gowning problematic species prior to plant installation. These problematic species include, but are not limited to: cattails (Typha ssp.), common reed (Phragmities australis), purple loosestrife (lythrum salicaria), and reed canary grass (Phalaris arundinacea). Contractor shall conduct the necessary pre-planting weed control to ensure that the planting zone is free of these species. Planting shall not be authorized if any of the species are actively growing in the basin

Planting Specifications

1. The Contractor shall furnish, transport, and install all plugs in the areas specified on the Landscape Plan
2. Planting activities shall be performed between May 1 and June 15, and after satisfactory site preparation has been completed.
3. The Contractor shall notify the Owner and/or the Owner's Agent 24 hours prior to planting.
4. All plant plugs shall be container grown in open bottom pots and have a minimum shoot heights of 12 inches at the time of planting. Pot dimensions shall be a minimum of 2-inches wide and 3-inches deep for each plug. Smaller pots are not acceptable. Soil saturation shall be maintained for all potted plants until installation. Plants material shall not be provided as dormant root or bare material (i.e., tubers, rhizomes) or bare root material, except for lilies (if specified).
5. All container plant material shall be inoculated with mycorrhizal fungi.
6. Container plants shall exhibit root growth sufficient to hold all soil intact with removed from container.
7. The container plants shall be protected from depredation by a 2-foot tall chicken wire fence. Wooden 2"x2" stakes shall be placed along each pod at 6-foot intervals along the fence into the substrate. Twine shall be strung over the top if each enclosure to create a web so that larger birds (i.e., geese and ducks) cannot enter the enclosure from above. The Contractor shall replace any plant killed from depredation at no charge.
8. The Contractor shall provide off-site disposal of all planting enclosures during the second growing season.
9. The Contractor shall water all plugs throughout the first growing season as necessary to achieve the performance criteria specified below.
10. The Owner and/or the Owner's Agent shall approve all species substitutions to the designated plug list at least one week prior to planting. Unapproved species delivered to the site shall not be accepted.
11. All plant materials shall be subject to inspection by the Owner and/or Owner's Agent prior to installation. Any plant not in compliance with these specifications or unapproved species substitutions shall not be accepted. The Contractor shall be required to replace unacceptable species within 72 hours from initial inspection. Thus, meeting the plant specifications is mandatory and no exceptions will be allowed.
12. The Contractor shall provide the Owner and/or the Owner's Agent copies of all the plants confirmation forms from the nurseries that provided material.
13. All specified wetland and/or emergent aquatic plugs shall be installed 2 to 3 foot on center in variously shaped pods scattered throughout their respective areas as illustrated on the Landscape Plan.

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The drawings, specifications, design ideas, and other information contained within as prepared by the Landscape Architect for this project are instruments of the Landscape Architect's service, for use solely with respects to this project and, unless otherwise provided, the Landscape Architect shall be deemed the author of these documents and shall retain all common law, statutory, and other rights, including copyright. This drawing is not to be reproduced without the expressed written consent of IVES/RYAN GROUP, INC.

REVISIONS

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

Attachment: Final Landscape Plans (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

IRG Ives/Ryan Group, Inc.
1741 S. WIEBSBROOK ROAD
WHEATON, IL 60189
PHONE: 630.738.0726

Landscape Architecture
Park & Recreation Design
Site & Community Planning

www.ivesryangroup.com

LANDSCAPE SPECIFICATION

PROJECT NO.: L920 JOB NO.: 9224A

DATE: 02/05/21
SCALE: noted
PLANNER: RM
DRAWN BY: RM
CHECKED:

SHEET L-4

24-Acre Palatine Property						
July 17&20, 2020						
Daniel Jablonski: V3 Companies Ltd.						
ISA Certified Arborist: IL-9636A						
Count	Tag #	DBH (inches)	Species Name*	Common Name	**Condition:** Excellent (1), Good (2), Fair (3), Fair to Poor (4), Poor (5), Dead (6)	Multi-stem Sizes (Inches)
1	2339		Crataegus crus-galli	Cock-Spur Hawthorn	2	3,3,3,2,2,1
2	2340		Crataegus crus-galli	Cock-Spur Hawthorn	2	4,3,3,2,2
3	2341		Crataegus crus-galli	Cock-Spur Hawthorn	2	6,6,4,4,3,3,3
4	2342	9.5	Ulmus spp.	Elm Cultivar	2	
5	2343	27	Acre spp.	Maple Cultivar	2	
6	2344	6.5	Acre spp.	Maple Cultivar	2	
7	2345	7	Acre spp.	Maple Cultivar	2	
8	2346	20	Pinus nigra	Austrian Pine	4	
9	2347	39	Gleditsia triacanthos	Honey-Locust	2	
10	2348	32	Gleditsia triacanthos	Honey-Locust	2	
11	2349	5.5	Ulmus americana	American Elm	3	
12	2350	10	Ulmus pumila	Siberian Elm	3	
13	2351	10	Ulmus pumila	Siberian Elm	4	
14	2352		Ulmus americana	American Elm	3	4.5,4.5,3
15	2353	7	Acer platanoides	Norway Maple	3	
16	2354	9.5	Ulmus americana	American Elm	3	
17	2355	7	Ulmus americana	American Elm	3	
18	2356	8	Juglans nigra	Black Walnut	4	
19	2357		Ulmus americana	American Elm	3	7,4,4
20	2358	5	Ulmus americana	American Elm	3	
21	2359	4.5	Ulmus americana	American Elm	3	
22	2360	7	Ulmus pumila	Siberian Elm	3	
23	2361	6.5	Ulmus americana	American Elm	3	
24	2362	5.5	Ulmus americana	American Elm	3	
25	2363		Ulmus americana	American Elm	3	6,4
26	2364		Ulmus americana	American Elm	4	6,6
27	2365		Juniperus virginiana	Eastern Red-Cedar	4	8,6,4
28	2366	5.5	Juniperus virginiana	Eastern Red-Cedar	4	
29	2367	5	Acer negundo	Ash-Leaf Maple	3	
30	2368	5	Ulmus americana	American Elm	3	
31	2369		Ulmus americana	American Elm	3	4.5,3
32	2370		Ulmus pumila	Siberian Elm	4	5,4
33	2371	6	Ulmus americana	American Elm	3	

Attachment: Tree Survey Rating Schedule (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

34	2372		Juniperus virginiana	Eastern Red-Cedar	4	8,6,4
35	2373	4	Ulmus americana	American Elm	3	
36	2374	13	Ulmus americana	American Elm	3	
37	2375		Acer negundo	Ash-Leaf Maple	3	8,8,8,6,4,4,4
38	2376		Acer negundo	Ash-Leaf Maple	5	8,6
39	2377		Ulmus americana	American Elm	3	5,2
40	2378	6	Acer negundo	Ash-Leaf Maple	3	
41	2379	7	Juniperus virginiana	Eastern Red-Cedar	4	
42	2380	7	Ulmus pumila	Siberian Elm	3	
43	2381		Acer negundo	Ash-Leaf Maple	3	6,6,3,2
44	2382		Acer negundo	Ash-Leaf Maple	3	6,6,6,5
45	2383		Acer negundo	Ash-Leaf Maple	3	5,4
46	2384		Acer negundo	Ash-Leaf Maple	3	7,6,3
47	2385		Acer negundo	Ash-Leaf Maple	3	5.5,1
48	2386		Acer negundo	Ash-Leaf Maple	3	6,1
49	2387		Acer negundo	Ash-Leaf Maple	3	5,3,2,2
50	2388		Acer negundo	Ash-Leaf Maple	3	6,4
51	2389	5.5	Acer negundo	Ash-Leaf Maple	3	
52	2390	4	Acer negundo	Ash-Leaf Maple	3	
53	2391		Acer negundo	Ash-Leaf Maple	3	6.4,5
54	2392	6.5	Acer negundo	Ash-Leaf Maple	3	
55	2393		Fraxinus pennsylvanica	Green Ash	6	6.5,3,3
56	2394	5	Acer negundo	Ash-Leaf Maple	3	
57	2395	4	Acer negundo	Ash-Leaf Maple	3	
58	2396		Acer negundo	Ash-Leaf Maple	3	6.5,3
59	2397		Acer negundo	Ash-Leaf Maple	4	4.5,4,3,3
60	2398		Acer negundo	Ash-Leaf Maple	4	5,1,1
61	2399		Acer negundo	Ash-Leaf Maple	4	5,3,3
62	2400	4.5	Acer negundo	Ash-Leaf Maple	3	
63	2401	18	Populus deltoides	Eastern Cottonwood	3	
64	2402		Acer negundo	Ash-Leaf Maple	3	9,6,5
65	2403		Acer negundo	Ash-Leaf Maple	4	8,8
66	2404		Acer negundo	Ash-Leaf Maple	3	8,8,6,6,4
67	2405	7	Ulmus pumila	Siberian Elm	3	
68	2406	6	Ailanthus altissima	Tree-of-Heaven	3	
69	2407	12	Ailanthus altissima	Tree-of-Heaven	3	
70	2408	6	Acer negundo	Ash-Leaf Maple	3	
71	2409	9	Ailanthus altissima	Tree-of-Heaven	3	
72	2410	8	Ailanthus altissima	Tree-of-Heaven	4	
73	2411	8	Ailanthus altissima	Tree-of-Heaven	4	
74	2412	7	Ailanthus altissima	Tree-of-Heaven	3	
75	2413	15.5	Acer platanoides	Norway Maple Cultivar	3	

76	2414	13	Acer platanoides	Norway Maple Cultivar	3	
77	2415	17	Gleditsia triacanthos	Honey-Locust	3	
78	2416	10	Gleditsia triacanthos	Honey-Locust	3	
79	2417	10	Gleditsia triacanthos	Honey-Locust	5	
80	2418	10	Gleditsia triacanthos	Honey-Locust	3	
81	2419	10	Gleditsia triacanthos	Honey-Locust	3	
82	2420	19	Pinus nigra	Austrian Pine	3	
83	2421	14	Pinus nigra	Austrian Pine	4	
84	2422	4.5	Gleditsia triacanthos	Honey-Locust	3	
85	2423	4.5	Gleditsia triacanthos	Honey-Locust	3	
86	2424	13	Pinus nigra	Austrian Pine	4	
87	2425		Pinus nigra	Austrian Pine	6	10,10,8,8
88	2426	6.5	Acer spp.	Maple Cultivar	5	
89	2427		Fraxinus pennsylvanica	Green Ash	6	8,7,5
90	2428		Ulmus americana	American Elm	3	12,12,12
91	2429	7	Fraxinus pennsylvanica	Green Ash	6	
92	2430	5	Acer negundo	Ash-Leaf Maple	3	
93	2431	5	Acer negundo	Ash-Leaf Maple	3	
94	2432		Fraxinus pennsylvanica	Green Ash	6	6,3
95	2433		Salix fragilis	Crack Willow	3	20,17
96	2434	12	Acer negundo	Ash-Leaf Maple	3	
97	2435	8	Acer negundo	Ash-Leaf Maple	5	
98	2436	10	Acer negundo	Ash-Leaf Maple	5	
99	2437	7	Ulmus pumila	Siberian Elm	4	
100	2438	17	Acer negundo	Ash-Leaf Maple	5	
101	2439	8	Acer negundo	Ash-Leaf Maple	3	
102	2440	30	Gleditsia triacanthos	Honey-Locust	3	
103	2441	27	Gleditsia triacanthos	Honey-Locust	3	
104	2442	26	Gleditsia triacanthos	Honey-Locust	2	
105	2443	23	Gleditsia triacanthos	Honey-Locust	3	
106	2444	22	Gleditsia triacanthos	Honey-Locust	3	
107	2445	32	salix babylonica	Chinese Willow	5	
108	2446	26	Gleditsia triacanthos	Honey-Locust	3	
109	2447	7	Ulmus americana	American Elm	3	
110	2448	6	Morus alba	White Mulberry	4	
111	2449		Morus alba	White Mulberry	4	6,3,3
112	2450		Morus alba	White Mulberry	4	4,2,2
113	2451		Ulmus americana	American Elm	4	5,4
114	2452	12	Ulmus pumila	Siberian Elm	4	
115	2453		Morus alba	White Mulberry	4	8,6,6,6,4
116	2454		Morus alba	White Mulberry	4	8,8,8,6,4
117	2455		Morus alba	White Mulberry	4	7,7,3

118	2456		Acer negundo	Ash-Leaf Maple	3	18,8
119	2457		Prunus spp.	Cherry Cultivar	4	8,8,4,4,4,4
120	2458	7	Morus alba	White Mulberry	4	
121	2459	36	Populus alba	White Poplar	4	
122	2460	16	Ulmus pumila	Siberian Elm	4	
123	2461	18	Picea abies	Norway Spruce	3	
124	2462	17	Picea abies	Norway Spruce	3	
125	2463	16	Picea abies	Norway Spruce	3	
126	2464	16	Picea abies	Norway Spruce	3	
127	2465		Acer negundo	Ash-Leaf Maple	3	10,6
128	2466	10	Picea abies	Norway Spruce	3	
129	2467	4.5	Gleditsia triacanthos	Honey-Locust	3	
130	2468	12	Picea abies	Norway Spruce	3	
131	2469	12	Picea abies	Norway Spruce	3	
132	2470		Acer negundo	Ash-Leaf Maple	3	10,6
133	2471	6	Fraxinus pennsylvanica	Green Ash	4	
134	2472		acer saccharinum	Silver Maple	3	7,7
135	2473	18	Ulmus americana	American Elm	2	
136	2474		Acer negundo	Ash-Leaf Maple	4	12,10,8,8
137	2475		Acer negundo	Ash-Leaf Maple	5	18,18
138	2476		Acer negundo	Ash-Leaf Maple	4	10,6,6,8,7
139	2477		Acer negundo	Ash-Leaf Maple	4	9,8,8,6,4
140	2478	10	Acer negundo	Ash-Leaf Maple	3	
141	2479		Acer negundo	Ash-Leaf Maple	4	18,7
142	2480	5	Fraxinus pennsylvanica	Green Ash	6	
143	2481		Acer negundo	Ash-Leaf Maple	4	18,14
144	2482		Acer negundo	Ash-Leaf Maple	3	20,10
145	2483	12	Morus alba	White Mulberry	3	
146	2484	4	Juniperus virginiana	Eastern Red-Cedar	3	
147	2485	19	Populus deltoides	Eastern Cottonwood	3	
148	2486	16	Populus deltoides	Eastern Cottonwood	3	
149	2487	10	Prunus serotina	Black Cherry	3	
150	2488		Juniperus virginiana	Eastern Red-Cedar	3	5,4
151	2489	4.5	Juniperus virginiana	Eastern Red-Cedar	3	
152	2490		Populus deltoides	Eastern Cottonwood	3	17,16
153	2491	18	Populus deltoides	Eastern Cottonwood	3	
154	2492	18	Populus deltoides	Eastern Cottonwood	3	
155	2493	18	Salix fragilis	Crack Willow	4	
156	2494	7	Ulmus pumila	Siberian Elm	5	
157	2495		Populus deltoides	Eastern Cottonwood	3	20,20
158	2496	10	Ulmus americana	American Elm	3	
159	2497	10	Ulmus americana	American Elm	3	

160	2498		Populus deltoides	Eastern Cottonwood	3	20,20
161	2499	18	Populus deltoides	Eastern Cottonwood	3	
162	2500	7.5	Prunus serotina	Black Cherry	3	
163	1	7.5	Juniperus virginiana	Eastern Red-Cedar	3	
164	2	8	Ulmus americana	American Elm	3	
165	3	10	Prunus serotina	Black Cherry	4	
166	4		Ulmus americana	American Elm	4	11,6
167	5	28	Ulmus pumila	Siberian Elm	3	
168	6	12	Ulmus pumila	Siberian Elm	3	
169	7		Malus spp.	Apple Cultivar	4	8,8,6,2
170	8		Malus spp.	Apple Cultivar	4	9,8,8,4,2,2
171	9	7	Picea pungens	Colorado Blue Spruce	3	
172	10	17	Populus deltoides	Eastern Cottonwood	4	
173	11	12	Populus deltoides	Eastern Cottonwood	3	
174	12	17	Populus deltoides	Eastern Cottonwood	3	
175	13	12	Populus deltoides	Eastern Cottonwood	3	
176	14	36	Ulmus americana	American Elm	3	
177	15	8	Picea abies	Norway Spruce	3	
178	16	8	Picea abies	Norway Spruce	3	
179	17	8	Picea abies	Norway Spruce	3	
180	18	8	Picea abies	Norway Spruce	3	
181	19	11	Picea abies	Norway Spruce	4	
182	20	4.5	Picea abies	Norway Spruce	6	
183	21	9	Picea abies	Norway Spruce	4	
184	22	8	Picea abies	Norway Spruce	4	
185	23	6	Picea abies	Norway Spruce	4	
186	24	9	Picea abies	Norway Spruce	3	
187	25	9	Picea abies	Norway Spruce	3	
188	26	10	Picea abies	Norway Spruce	4	
189	27	9	Picea abies	Norway Spruce	4	
190	28	10	Picea abies	Norway Spruce	4	
191	29	9	Picea abies	Norway Spruce	4	
192	30	10	Picea abies	Norway Spruce	4	
193	31	9	Picea abies	Norway Spruce	4	
194	32	11	Picea abies	Norway Spruce	4	
195	33	11	Picea abies	Norway Spruce	4	
196	34	11	Picea abies	Norway Spruce	4	
197	35	14	Picea abies	Norway Spruce	4	
198	36	14	Picea abies	Norway Spruce	4	
199	37	7	Picea abies	Norway Spruce	4	
200	38	13	Picea abies	Norway Spruce	4	
201	39	9	Picea abies	Norway Spruce	4	

202	40	13	Picea abies	Norway Spruce	4	
203	41	9	Picea abies	Norway Spruce	4	
204	42	12	Picea abies	Norway Spruce	4	
205	43	10	Picea abies	Norway Spruce	4	
206	44	13	Picea abies	Norway Spruce	4	
207	45	7	Picea abies	Norway Spruce	4	
208	46	10	Picea abies	Norway Spruce	4	
209	47	12	Picea abies	Norway Spruce	4	
210	48	9	Picea abies	Norway Spruce	4	
211	49	9	Picea abies	Norway Spruce	4	
212	50	10	Picea abies	Norway Spruce	4	
213	51	10	Picea abies	Norway Spruce	4	
214	52	10	Picea abies	Norway Spruce	4	
215	53	12	Picea abies	Norway Spruce	4	
216	54	12	Picea abies	Norway Spruce	4	
217	55	12	Picea abies	Norway Spruce	4	
218	56	9	Picea abies	Norway Spruce	4	
219	57	10	Picea abies	Norway Spruce	4	
220	58	8	Picea abies	Norway Spruce	4	
221	59	10	Picea abies	Norway Spruce	4	
222	60	10	Picea abies	Norway Spruce	4	
223	61	9	Picea abies	Norway Spruce	4	
224	62	10	Picea abies	Norway Spruce	4	
225	63	10	Picea abies	Norway Spruce	4	
226	64	7	Picea abies	Norway Spruce	4	
227	65	7	Picea abies	Norway Spruce	4	
228	66	9	Picea abies	Norway Spruce	4	
229	67	8	Picea abies	Norway Spruce	4	
230	68	9	Picea abies	Norway Spruce	4	
231	69	7	Picea abies	Norway Spruce	4	
232	70	8	Picea abies	Norway Spruce	3	
233	71	9	Picea abies	Norway Spruce	4	
234	72	9	Picea abies	Norway Spruce	4	
235	73	9	Picea abies	Norway Spruce	4	
236	74	10	Picea abies	Norway Spruce	4	
237	75	8	Picea abies	Norway Spruce	4	
238	76	10	Picea abies	Norway Spruce	4	
239	77	9	Picea abies	Norway Spruce	4	
240	78	10	Picea abies	Norway Spruce	3	
241	79	6	Picea abies	Norway Spruce	3	
242	80	8	Picea abies	Norway Spruce	3	
243	81	7	Picea abies	Norway Spruce	4	

244	82	6	Picea abies	Norway Spruce	4	
245	83	7	Picea abies	Norway Spruce	4	
246	84	7	Picea abies	Norway Spruce	4	
247	85	6	Picea pungens	Colorado Blue Spruce	4	
248	86	6	Picea pungens	Colorado Blue Spruce	4	
249	87	7	Picea pungens	Colorado Blue Spruce	4	
250	88	6	Picea pungens	Colorado Blue Spruce	4	
251	89	6	Picea pungens	Colorado Blue Spruce	4	
252	90	5	Picea pungens	Colorado Blue Spruce	3	

TREE LOCATION EXHIBIT

N

SCALE 1" = 60'

0 60 120

TREE LOCATIONS ARE APPROXIMATE

LEGEND

TREE WITH TAG NUMBER

FIR TREE WITH TAG NUMBER

TREELINE

SEE TREE INVENTORY
PREPARED BY: V3 COMPANIES, LTD
LAST DATED: JULY 17 & 20, 2020

NO.	DATE	REMARKS

EXISTING CONDITIONS

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS
9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061TREESUR-01

DATE: 09/03/2020

JOB NO. 11061

SHEET E1

1 OF 1

Attachment: Existing Tree Location Plan (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, CORPS OF ENGINEERS
231 SOUTH LA SALLE STREET
CHICAGO, ILLINOIS 60604-1437

REPLY TO
ATTENTION OF:

July 31, 2020

Operations Division
Regulatory Branch
LRC-2020-00573

SUBJECT: Jurisdictional Determination for the 24 Acre Palatine Property in Palatine, Cook County, Illinois (Latitude 42.1079018198004, Longitude -88.0382348379299)

Path Schaner
Midwest Industrial Funds
1211 West 22nd Street
Oak Brook, Illinois 60523

Dear Mr. Schaner:

This is in response to your request that the U.S. Army Corps of Engineers complete a jurisdictional determination for the above-referenced site submitted on your behalf by V3 Companies, Ltd. The subject project has been assigned number LRC-2020-00573. Please reference this number in all future correspondence concerning this project.

Following a review of the information you submitted, this office has determined that the subject property contains "waters of the United States".

Area 1 has been determined to be under the jurisdiction of this office and therefore, subject to Federal regulation.

In the event an application is submitted for work within jurisdictional areas, a concurrence of the wetland boundaries and/or a professional survey of the identified wetland and water features stamped by a professional surveyor will need to be prepared and shall accompany the approved wetland delineation.

For a detailed description of our determination please refer to the enclosed decision document. This determination covers only your project as depicted in the Wetland Delineation and Assessment Report dated June 29, 2020, prepared by V3 Companies, Ltd.

This determination is valid for a period of five (5) years from the date of the letter, unless new information warrants revision of the determination before the expiration date or a District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

Attachment: Wetland ACOE JD-Approved 2020-07-31 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

This letter is considered an approved jurisdictional determination for your subject site. If you object to this determination, you may appeal, according to 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and a Request for Appeal (RFA) form. If you request to appeal the above determination, you must submit a completed RFA form to the Great Lakes/Ohio River Division Office at the following address:

Jacob Siegrist
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699 Fax: (513) 684-2460

In order to be accepted, your RFA must be complete, meet the criteria for appeal and be received by the Division Office within sixty (60) days of the date of the NAP. If you concur with the determination in this letter, submittal of the RFA form to the Division office is not necessary.

This determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

It is your responsibility to obtain any required state, county, or local approvals for impacts to wetland areas not under the Department of the Army jurisdiction. For projects located in unincorporated and unauthorized municipalities in Cook County, please contact the Metropolitan Water Reclamation District of Greater Chicago at (312) 751-3247. For projects in incorporated areas of Cook County, contact the authorized municipality for information related to the Watershed Management Ordinance.

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States, including wetlands. A Department of the Army permit is required for any proposed work involving the discharge of dredged or fill material within the jurisdiction of this office. To initiate the permit process, please submit a joint permit application form along with detailed plans of the proposed work. Information concerning our program, including the application form and an application checklist, can be found at and downloaded from our website:
http://www.lrc.usace.army.mil/Missions/Regulatory.aspx

Attachment: Wetland ACOE JD-Approved 2020-07-31 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

If you have any questions, please contact Mr. Michael J. Machalek of my staff by telephone at (312) 846-5534 or email at Mike.J.Machalek@usace.army.mil.

Sincerely,

CHERNICH.KATHLEEN.G.1230365616

Digitally signed by CHERNICH.KATHLEEN.G.1230365616
Date: 2020.07.31 23:55:50 -05'00'

Kathleen G. Chernich
Chief, East Section
Regulatory Branch

Enclosures

Copy Furnished w/out Enclosures

Cook County Building and Zoning (Michael Fazio)
Metropolitan Water Reclamation District of Greater Chicago (Dan Feltes)
V3 Companies, Ltd. (Scott Brejcha)

Attachment: Wetland ACOE JD-Approved 2020-07-31 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Path Schaner, Midwest Industrial Funds	File Number: LRC-2020-00573	Date: July 31, 2020

Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A. INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district commander. Your objections must be received by the district commander within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district commander will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district commander will send you a proffered permit for your reconsideration, as indicated in Section B below.

B. PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

C. PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

D. APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.

E. PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

Attachment: Wetland ACOE JD-Approved 2020-07-31 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Regulatory Branch
Chicago District Corps of Engineers
231 South LaSalle Street, Suite 1500
Chicago, IL 60604-1437
Phone: (312) 846-5530
Fax: (312) 353-4110

If you only have questions regarding the appeal process you may also contact:

Jacob Siegrist
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10524
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699 Fax: (513) 684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Commanders personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:

Attachment: Wetland ACOE JD-Approved 2020-07-31 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

WETLAND DELINEATION AND ASSESSMENT REPORT

PROJECT SITE:

24-Acre Palatine Property

Palatine, Cook County, Illinois

PREPARED FOR:

Midwest Industrial Funds
1211 W. 22nd Street, Suite 410
Oak Brook, Illinois 60523

PREPARED BY:

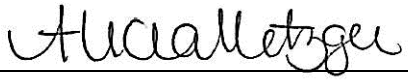
V3 Companies, Ltd.
7325 Janes Avenue
Woodridge, Illinois 60517
630-724-9200

June 18, 2020

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

We hereby certify that this Wetland Delineation and Assessment Report has been prepared by V3 Companies for use by Midwest Industrial Funds, their affiliates, lenders, and assignees.

Project Staff:



Alicia Metzger, CPSC, PWS
Soil Scientist

Daniel Jablonski
Wetland Scientist

Approved by:

Scott J. Brejcha, PWS
Wetland Consulting Group Leader
Natural Resources Division

Thomas E. Slowinski, PWS
Technical Director, Wetlands and Ecology
Natural Resources Division

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

EXECUTIVE SUMMARY

The approximately 24-acre subject property was investigated by V3 Companies (V3) on June 1, 2020 to determine the presence, extent and quality of any wetlands or other areas under U.S. Army Corps of Engineers (USACE) and/or Metropolitan Water Reclamation District (MWRD) jurisdiction.

Delineation Summary

One man-made drainage feature (Area 1) was identified along the eastern property boundary. Area 1 (0.56 acres) is a man-made stormwater drainage feature that conveys stormwater from a pipe located at the northern end and flows south to a pipe located at the southern end. Area 1 appears on the subject property in 1972 during construction of the building, as seen on historical aerial imagery (Appendix VI). A summary of the data points is provided in Table 1.

In V3's professional opinion, Area 1 is a man-made drainage feature that is exempt from jurisdiction. V3 recommends that a jurisdictional determination from USACE be conducted to confirm the jurisdiction of these areas.

Regulatory Summary

Pursuant to Section 404 of the Clean Water Act, the U. S. Army Corps of Engineers (USACE) has jurisdiction over the placement of fill or dredged material in all jurisdictional waters of the United States. Jurisdictional areas include rivers, streams, tributary waterways, lakes, natural ponds and wetlands adjacent to these areas. A Section 404 permit must be obtained before placing any fill material within a jurisdictional area.

Wetlands that lack a continuous surface connection through a relatively permanent tributary to traditionally navigable waters are considered isolated wetlands and are not regulated under the Clean Water Act.[1] To be considered relatively permanent, a tributary must have continuous flow at least seasonally (typically at least three months). Swales and erosional features are generally not considered to be tributaries or waters of the United States. Ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow are also generally not waters of the U. S. Wetlands adjacent to tributaries and ditches that do not have a relatively continuous flow will be regulated only if they have a significant nexus to traditionally navigable waters. A significant nexus determination will be based on hydrologic and ecological factors.

If less than 0.10 acre of impact to USACE jurisdictional wetlands are proposed, the project would likely qualify for a Regional Permit from the USACE without wetland mitigation. If wetland impacts will consist of between 0.10 acre and 1.0 acre of wetland, a Regional Permit would still be possible, but compensatory mitigation will be required at a minimum ratio of 1.5:1. Mitigation at a higher ratio (typically 3:1 or greater) would be required for impacts to High Quality Aquatic Resources (HQAR). Wetland impacts greater than 1.0 acre will require an Individual Permit, with a public comment period and additional regulatory scrutiny. Required buffer widths under the Regional Permit Program are shown

[1] December 2, 2008, USEPA and the Department of the Army Joint Memorandum, Clean Water Act Jurisdiction Following the U.S. Supreme Court Decision in Rapanos v. United States and Carabell v. United States

in Table 1. If a permit from the USACE is not required, then the USACE buffer requirements are not applicable.

On May 16, 2019, the Metropolitan Water Reclamation District (MWRD) implemented the Cook County Watershed Management Ordinance (WMO) which regulates isolated wetlands and isolated "waters" within Cook County. The Cook County WMO requires a Watershed Management Permit for any proposed impacts to isolated wetlands and/or isolated "waters" of Cook County resulting from regulated development activities. Impacts to isolated wetlands/waters of Cook County that are equal to or exceed 0.10 acre will require compensatory mitigation based on the quality of the area. Mitigation at a ratio of 1.5:1 is required for impacts to Standard Isolated Wetlands (SIW) which are defined as isolated wetlands and "waters" of Cook County that have a NMC less than 3.5 and an FQI less than 20. Mitigation at a ratio of 3:1 is required for impacts to High Quality Isolated Wetlands (HQIW) which are defined as isolated wetlands and "waters" of Cook County that have a NMC of 3.5 or greater and/or an FQI of 20 or greater. Buffer requirements, which are dependent on the quality and size of the wetland, are shown in Table 1.

Table 1. Data Point Summary Table.

Area	Data Point	Hydrophytic Vegetation?	Hydric Soils?	Wetland Hydrology?	Wetland (Y/N)
1	X01	Y	Y	Y	N*
	X03	Y	N	Y	N
2	X02	Y	N	Y	N

* = Man-made drainage feature

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

INTRODUCTION AND BACKGROUND

The approximately 24-acre subject property was investigated by V3 Companies (V3) on June 1, 2020 to determine the presence, extent and quality of any wetlands or other areas under U.S. Army Corps of Engineers (USACE) and/or Metropolitan Water Reclamation District (MWRD) jurisdiction. Any identified wetland boundaries are marked in the field using pink wire flags labeled "Wetland Delineation". This report summarizes the results of the field investigation and provides technical documentation for all investigated areas.

The subject property is located north of Helen Road, south of the Union Pacific Railroad tracks, east of Plum Grove Road and west of Hicks Road in Palatine, Cook County, Illinois (Section 23, T42N, R10E; 42.106170°N, −88.063630°W; Palatine Quadrangle, Figure 1).

No wetlands are identified on the subject property on the National Wetlands Inventory (NWI) Map (Figure 2).

The USGS Hydrologic Atlas (Figure 3) does not show any streams or creeks on the subject property. Two areas of isolated ponding are identified in the northwestern and southeastern portions of the subject property.

The 12-Digit Hydrologic Unit Code (HUC) Map (Figure 4) shows that the subject property lies within the Upper Salt Creek sub watershed (Hydrologic Unit 071200040401), which is associated with the larger Des Plaines River watershed.

The FEMA Flood Insurance Rate Map (FIRM) (Figure 5) does not identify flood zone on the subject property.

The Flood Zones of Cook County, Illinois Map (2019) (Figure 6) does not identify flood zone on the subject property.

Two soil series are mapped on the subject property on the Soil Survey of Cook County, Illinois Map (Figure 7) and include Orthents (805B) and Markham-Ashkum-Beecher complex (854B). Neither of these soils are hydric.

The Wetland Delineation Map (Figure 8) shows the location of all data points and the location of the identified area as collected via a handheld GPS unit.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Wetland Delineation Methods

Wetland delineations are conducted following the methods given in the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region*. Under the delineation procedures in this manual, an area must exhibit characteristic hydrophytic vegetation, hydric soils, and wetland hydrology to be considered a wetland. If field investigation determines that any of the three parameters are not satisfied, the area usually does not qualify as wetland. Moreover, drainage ditches excavated in dry land are generally not considered jurisdictional waters of the United States by the Corps of Engineers (preamble to 33 CFR Parts 320 through 330, *Federal Register* Vol. 56, No. 219, 41217).

As part of a delineation report, data forms and technical information are required by the U.S. Army Corps of Engineers, to document the three parameters for any area determined to be wetland. Data forms for wetlands identified at the subject property are provided in Appendix I. The vegetation data calculated on the data forms reflects the changes made to the National Wetland Plant List as of May 1, 2016. Representative photographs of delineated wetlands are provided in Appendix II. A brief description of the field methods used and a description of the three wetland parameters are provided in Appendix IV.

Plant species lists are compiled for each area identified, focusing on the plant communities within each identified wetland area. This accumulated floristic data is analyzed using the Floristic Quality Assessment (FQA) methodology, which is an assessment technique for a rapid quality evaluation of vegetation in a defined area. Technical names in the FQA and this report follow the nomenclature of *The National Wetland Plant List: 2014 Update of Wetland Ratings* (Lichvar *et. al.,* 2014). A detailed explanation of the Floristic Quality Assessment method is provided in Appendix IV.

As part of the wetland delineation assessment, Illinois Department of Natural Resources (IDNR) and US Fish and Wildlife Service (USFSW) threatened and endangered species evaluations were conducted (Appendix V).

The IDNR confirmed that the Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. A copy of the termination letter from the IDNR is included in Appendix V.

The USFWS Section 7 consultation did not find species or critical habitat present on the subject property. A copy of the USFWS Section 7 consultation is included in Appendix V.

RESULTS OF THE FIELD INVESTIGATION

AREAS INVESTIGATED

Area 1 – Man-Made Drainage Features

Data Points X01 and X03

Area 1 (0.56 acres) is a man-made stormwater drainage feature that conveys stormwater from a pipe located at the northern end and flows south to a pipe located at the southern end. Area 1 appears on the subject property in 1972 during construction of the building, as seen on historical aerial imagery (Appendix VI) and in V3's professional opinion is exempt from jurisdiction.

Vegetation:

- The dominant plant species at Data Point X01 are river bulrush (*Schoenoplectus fluviatilis*), jewelweed (*Impatiens capensis*) and reed canary grass (*Phalaris arundinacea*). 100% of the dominant species are hydrophytic, so the vegetation criterion is satisfied at Data Point X01.
- The dominant plant species at Data Point X03 are path rush (*Juncus tenuis*) and Kentucky blue grass (*Poa pratensis*). 100% of the dominant species are hydrophytic, so the vegetation criterion is satisfied at Data Point X03.

Soils:

- The soil profile at Data Point X01 consisted of 0-6 inches of black (10YR 2/1) muck underlain by impenetrable gravel. This profile exhibits hydric soil field indicator A10, 2 cm muck, and satisfies the soils criterion.
- The soil profile at Data Point X03 consisted of 0-5 inches of gray (10YR 4/2) silt/sediment with gravel, rock and mixed fill including bricks and chunks of concrete. The soil in this location does not meet a hydric soil indicator, so the soils criterion is not satisfied.

Hydrology:

- The soil was saturated at the surface, so the hydrology criterion is satisfied at Data Point X01.
- The area at Data Point X03 was inundated to a depth of 1 inch, so the hydrology criterion is satsfieid.

Conclusion: Data Point X01 satisfies all three criteria and Data Point X03 fails to satisfy the soils criterion. In V3's professional opinion, Area 1 is a man-made drainage feature that was constructed in 1972 as part of the stormwater system and is exempt from jurisdiction.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Area 2 – Upland

Data Point X02

Area 2 consists of the upland area between Data Point X01 and X03 where the drainage feature in contained in an underground pipe.

Vegetation: The dominant plant species at Data Point X02 is creeping bentgrass (*Agrostis stolonifera*). The dominant species is hydrophytic, so the vegetation criterion is satisfied.

Soils: The soil profile at Data Point X02 consisted of 0-1 inch of black (10YR 2/1) silt loam underlain by 7 inches of brown (10YR 5/4) silty clay loam mixed fill and gravel. The soil in this location does not meet a hydric soil indicator, so the soils criterion is not satisfied.

Hydrology: The soil was saturated at the surface, which satisfies the hydrology criterion at Data Point X02.

Conclusion: Data Point X02 fails to satisfy the soils criterion; therefore Area 2 does not qualify as wetland.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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APPENDIX I

WETLAND DELINEATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 24 Acre Palatine Property | City/County: Palatine/Cook | Sampling Date: 01-Jun-20

Applicant/Owner: Midwest Industrial Funds | State: IL | Sampling Point: **X01**

Investigator(s): Alicia Metzger & Daniel Jablonski | Section, Township, Range: S 23 T 42N R 10E

Landform (hillslope, terrace, etc.): Channel (active) | Local relief (concave, convex, none): flat

Slope: 0.0% / 0.0 ° | Lat.: 42.107939 | Long.: -88.037778 | Datum: NAD 1983

Soil Map Unit Name: Ortents clayey undulating (805B) | NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉	No ○	
Hydric Soil Present?	Yes ◉	No ○	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Wetland Hydrology Present?	Yes ◉	No ○	

Remarks:
This location satisfies all three criteria and qualifies as wetland. Data Point X01 is a man-made stormwater drainage feature that is exempt from jurisdiction.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30')			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Schoenoplectus fluviatilis	40	☑ 50.0%	OBL
2. Impatiens capensis	20	☑ 25.0%	FACW
3. Phalaris arundinacea	20	☑ 25.0%	FACW
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
6.	0	☐ 0.0%	
7.	0	☐ 0.0%	
8.	0	☐ 0.0%	
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	80	= Total Cover	
Woody Vine Stratu (Plot size: 5')			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	40	x 2 =	80
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	80 (A)		120 (B)

Prevalence Index = B/A = 1.500

Hydrophytic Vegetation Indicators:

- ☑ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☑ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

[1] **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.**

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: (Include photo numbers here or on a separate sheet.)
All of the dominant species are hydrophytic, so the vegetation criterion is satisfied.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SOIL

Sampling Point: X01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR 2/1						Muck	
6+								Gravel

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2] Location: PL=Pore Lining. M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☑ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 6

Hydric Soil Present? Yes ◉ No ○

Remarks:

This profile exhibits hydric soil field indicator A10, 2cm Muck, and satisfies the soils criterion.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The soil was saturated at the surface which satisfies the hydrology criterion.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 24 Acre Palatine Property | City/County: Palatine/Cook | Sampling Date: 01-Jun-20

Applicant/Owner: Midwest Industrial Funds | State: IL | Sampling Point: X02

Investigator(s): Alicia Metzger & Daniel Jablonski | Section, Township, Range: S 23 T 42N R 10E

Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): flat

Slope: 0.0% / 0.0 ° | Lat.: 42.105666 | Long.: -88.038709 | Datum: NAD 1983

Soil Map Unit Name: Markham-Ashkum-Beecher complex (854B) | NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ○

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉	No ○	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Hydric Soil Present?	Yes ○	No ◉	
Wetland Hydrology Present?	Yes ◉	No ○	

Remarks:
This location fails the soils criterion and does not qualify as wetland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30')			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Agrostis stolonifera	70	☑ 100.0%	FACW
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
6.	0	☐ 0.0%	
7.	0	☐ 0.0%	
8.	0	☐ 0.0%	
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	70	= Total Cover	
Woody Vine Stratu (Plot size: 5')			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	70 (A)		140 (B)

Prevalence Index = B/A = 2.000

Hydrophytic Vegetation Indicators:

- ☑ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☑ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

[1] **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.**

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: (Include photo numbers here or on a separate sheet.)
The dominant species is hydrophytic, so the vegetation criterion is satisfied.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SOIL

Sampling Point: X02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/1						Silt Loam	
1-8	10YR 5/4						Silty Clay Loam	Mixed Fill/Gravel

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining. M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks:

The soil in this location does not meet a hydric soil indicator, so the soils criterion is not satisfied.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The soil was saturated at the surface which satisfies the hydrology criterion.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 24 Acre Palatine Property | City/County: Palatine/Cook | Sampling Date: 01-Jun-20

Applicant/Owner: Midwest Industrial Funds | State: IL | Sampling Point: **X03**

Investigator(s): Alicia Metzger & Daniel Jablonski | Section, Township, Range: S 23 T 42N R 10E

Landform (hillslope, terrace, etc.): Channel (active) | Local relief (concave, convex, none): flat

Slope: 0.0% / 0.0 ° | Lat.: 42.105178 | Long.: -88.038472 | Datum: NAD 1983

Soil Map Unit Name: Ortents clayey undulating (805B) | NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ◉ No ○ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? | Are "Normal Circumstances" present? Yes ◉ No ○

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ◉	No ○	
Hydric Soil Present?	Yes ○	No ◉	**Is the Sampled Area within a Wetland?** Yes ○ No ◉
Wetland Hydrology Present?	Yes ◉	No ○	

Remarks:
This location fails the soils criterion and does not qualify as wetland. Data Point X03 is a man-made stormwater drainage feature that is exempt from jurisdiction.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30')			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Juncus tenuis	20	☑ 33.3%	FAC
2. Poa pratensis	40	☑ 66.7%	FAC
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
6.	0	☐ 0.0%	
7.	0	☐ 0.0%	
8.	0	☐ 0.0%	
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	60	= Total Cover	
Woody Vine Stratu (Plot size: 5')			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	60 (A)		180 (B)

Prevalence Index = B/A = 3.000

Hydrophytic Vegetation Indicators:

- ☐ **1 - Rapid Test for Hydrophytic Vegetation**
- ☑ **2 - Dominance Test is > 50%**
- ☑ **3 - Prevalence Index is ≤3.0** [1]
- ☐ **4 - Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

[1] **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.**

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: (Include photo numbers here or on a separate sheet.)
All of the dominant species are hydrophytic, so the vegetation criterion is satisfied.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

SOIL

Sampling Point: X03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5	10YR 4/2						Silt	Gravel, Rock, Silt, Mixed Fill

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining. M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks:

The soil in this location does not meet a hydric soil indicator, so the soils criterion is not satisfied.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ◉ No ○ Depth (inches): 1

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The area was inundated to a depth of 1 inch, so the hydrology criterion is satisfied.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

APPENDIX II

REPRESENTATIVE PHOTOGRAPHS

PHOTO 1

06/01/2020

View of Area 1 from Data Point X01, facing southwest.

PHOTO 2

06/01/2020

View of the pipe located at the north end of Area 1.

PHOTO 3

06/01/2020

View of Area 1 facing west.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PHOTO 4

06/01/2020

View of Area 1 along the west side of the building, facing south.

PHOTO 5

06/01/2020

View of drainage pipes observed in Area 1 along the west side of the building, facing south.

PHOTO 6

06/01/2020

View of Area 1 along the west side of the building, facing north.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PHOTO 7

06/01/2020

View of the upland area between the drainage areas along the west side of the building, facing south.

PHOTO 8

06/01/2020

View of the upland area between the drainage areas along the west side of the building, facing south.

PHOTO 9

06/01/2020

View of the upland area at Data Point X02, facing south.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PHOTO 10

06/01/2020

View of Area 1 along the south side of the building, facing east.

PHOTO 11

06/01/2020

View of Area 1 at Data Point X03.

PHOTO 12

06/01/2020

View of Area 1 along the south side of the building, facing northeast.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PHOTO 13

06/01/2020

Representative view of the eastern portion of the subject property, facing south.

PHOTO 14

06/01/2020

Representative view of the eastern portion of the subject property, facing west.

PHOTO 15

06/01/2020

Representative view of the eastern portion of the subject property, facing southeast.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PHOTO 16

06/01/2020

Representative view of the eastern portion of the subject property, facing east.

PHOTO 17

06/01/2020

Representative view of the eastern portion of the subject property, facing north.

PHOTO 18

06/01/2020

Representative view of the eastern portion of the subject property, facing south.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

APPENDIX III

REGULATORY INFORMATION

REGULATORY REQUIREMENTS

U.S. ARMY CORPS OF ENGINEERS

Pursuant to Section 404 of the Clean Water Act, the U. S. Army Corps of Engineers (USACE) has jurisdiction over the placement of fill or dredged material in all jurisdictional waters of the United States. Jurisdictional areas include rivers, streams, tributary waterways, lakes, natural ponds, and wetlands adjacent to these areas. A Section 404 permit must be obtained before placing any fill material within a jurisdictional area.

Wetlands that lack a continuous surface connection through a relatively permanent tributary to traditionally navigable waters are considered isolated wetlands and are not regulated under the Clean Water Act.[1] To be considered relatively permanent a tributary must have continuous flow at least seasonally (typically at least three months). Swales and erosional features are generally not considered to be tributaries or waters of the United States. Ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow are also generally not waters of the U. S. Wetlands adjacent to tributaries and ditches that do not have a relatively continuous flow will be regulated only if they have a significant nexus to traditionally navigable waters. A significant nexus determination will be based on hydrologic and ecological factors.

General permits, including nationwide and regional permits, are designed to expedite the processing of permits for minor non-controversial projects that are similar in nature and of minimal environmental impact. Currently, 52 nationwide permits have been issued. They became effective on March 19, 2017, and will expire on March 18, 2022.

Within the boundaries of the Chicago District, USACE, most NWPs were replaced with the Regional Permit Program (RPP), which were reissued on April 1, 2017 and will expire on April 1, 2022. Category I RPPs will generally authorize impacts of 0.50 acres or less. Category II RPPs will authorize impacts of between 0.50 acres and 1.0 acre. Any projects proposing impacts to High Quality Aquatic Resources will be processed under Category II. Compensatory wetland mitigation, at a ratio of 1.5:1, is required for all projects that impact more than 0.10 acre. Mitigation for impacts to High Quality Aquatic Resources typically is required at a higher ratio (generally 3:1 or greater).

High Quality Aquatic Resources (HQARs) are aquatic areas considered to be regionally critical due to their uniqueness, scarcity, and/or value, and other wetlands considered to perform functions important to the public interest, as defined in 33 CFR 320.4(b)(2). These resources include Advanced Identification (ADID) sites, bogs, ephemeral pools, fens, forested wetlands, sedge meadows, seeps, streams rated Class A or B in the Illinois Biological Stream Characterization study, streamside marshes, wet prairies, wetlands supporting Federal or Illinois endangered or threatened species, and wetlands with a floristic quality index of 20 or greater, or mean C-value of 3.5 or greater. These areas generally are regarded as unsuitable for dredge or fill activities. See Appendix IV for definitions of the wetland types, and criteria used to evaluate the presence of HQARs during wetland delineations.

[1] December 2, 2008, USEPA and Department of the Army Joint Memorandum, Clean Water Act Jurisdiction Following the U. S. Supreme Court Decision in Rapanos v. United States and Carabell v. United States.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Wetland impacts greater than 1.0 acre will require authorization under an individual permit (IP), which requires greater scrutiny of the proposed project by the USACE and other concerned government agencies, and a comment period from the general public.

COOK COUNTY REQUIREMENTS

On May 1, 2019, the Metropolitan Water Reclamation District (MWRD) will implement the Cook County Watershed Management Ordinance (WMO) which will regulate isolated wetlands and isolated "waters" within Cook County. The Cook County WMO will require a Watershed Management Permit from MWRD or an authorized municipality for any proposed impacts to isolated wetlands, wetland buffers and/or riparian environments resulting from regulated development activities.

Isolated Wetlands

Impacts to isolated wetlands of Cook County that are equal to or exceed 0.10 acre will require compensatory mitigation based on the quality of the area. Mitigation at a ratio of 1.5:1 is required for impacts to Standard Isolated Wetlands (SIW) and mitigation at a ratio of 3:1 is required for impacts to High Quality Isolated Wetlands (HQIW).

The following isolated wetland areas are exempt from the wetland requirements of the WMO:

A) Wetlands in roadside ditches created by excavation in upland areas;

B) Wetlands created by excavation or by other unfinished development activities in upland areas;

C) Wetlands created by artificial hydrology including, but not limited to, irrigation or detention facility outlets which would revert to upland areas if irrigation were to cease;

D) Wetlands created by the construction of stormwater facilities in upland areas, provided that the facility was not created for the purpose of wetland mitigation; and

E) Wetlands created by the construction of ponds in upland areas.

Wetland delineation reports and investigations that identify isolated wetlands or waters of Cook County will require an on-site field verification by MWRD or an authorized municipality. A list of Authorized Municipalities will be provided by MWRD when the list is completed.

Buffers

Wetland buffers for isolated wetlands of Cook County shall be determined according to the functions of the wetland. Minimum isolated wetland buffer widths shall be as follows:

A) Thirty (30) feet from the boundary of standard isolated wetlands greater than or equal to one-tenth of an acre (0.10 acre) and less than one-half of an acre (0.5 acre) in area;

B) Fifty (50) feet from the boundary of standard isolated wetlands greater than or equal to

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

one-half of an acre (0.5 acre) in area; or

C) One-hundred (100) feet from the boundary of high quality isolated wetlands.

The wetland buffer width for isolated wetlands of Cook County may be varied to a minimum of the greater of one-half the required buffer width or 30 feet, upon approval of either MWRD or an authorized municipality. Impacts to buffer areas shall be mitigated through the replacement or enhancement of impacted buffer functions.

Riparian Environments

Based on the WMO, a riparian environment is defined as:

"The vegetated area between aquatic and upland ecosystems adjacent to a waterway or body of water that provides flood management, habitat, and water quality enhancement or other amenities dependent upon the proximity to water."

Any developments involving riparian environments shall identify the boundaries of those riparian environments. The Riparian Environment Determination is as follows:

A) For any Jurisdictional Waters of the U.S. that does not qualify as a wetland, the riparian environment shall be fifty (50) feet from the Ordinary High Water Mark (OHWM).

B) For any isolated Waters that do not qualify as a wetland, the riparian environment shall be thirty (30) feet from the Ordinary High Water Mark (OHWM).

C) For any Jurisdictional Waters of the U.S. or for any Isolated Waters that does not qualify as a wetland identified as a Biologically Significant Stream (BSS), the riparian environment shall be one-hundred (100) feet from the Ordinary High Water Mark (OHWM).

The following Isolated Waters of Cook County are not considered to be riparian environments and shall be exempt from the riparian environment requirements of the WMO:

A) Roadside ditches created by excavation for the purposes of stormwater conveyance;

B) Channels or bodies of water created by unfinished development activities; or,

C) Channels or bodies of water created by the construction of stormwater facilities for the purposes of stormwater management.

Proposed adverse impacts to a riparian environment will require approval from MWRD or an authorized municipality. Mitigation will also be required for adverse impacts or modification to the existing functions of a riparian environment.

APPENDIX IV

DELINEATION METHODS AND FLORISTIC ANALYSIS

WETLAND DELINEATION METHODS

The site was field-inspected and plant species lists were recorded to document the vegetation types present. A wetland indicator status is assigned to each plant species based on a regional list published by the U.S. Army Corps of Engineers in 2016. The categories are based on the estimated probability that a species would be naturally encountered in a wetland. Under the *Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region*, the area is considered to be dominated by hydrophytic vegetation and representative of a wetland plant community by one of two methods, the dominance test or the prevalence index. The dominance test is satisfied if greater than 50% of the dominant plant species in a given area have a wetland indicator status of FAC, FACW, or OBL. The prevalence index assigns a numeric value to the wetland indicator status, and uses a weighted-average of the wetland indicator status of all plant species present in the sampling area. A wetland plant community is present if the prevalence index is less than 3.0.

Plant Wetland Indicator Status Categories

Indicator Category	Symbol	Indicator Definition
Obligate Wetland Plants	OBL	Plants that occur almost always (estimated probability greater than 99%) in wetlands under natural conditions, but which may also occur rarely in non-wetlands.
Facultative Wetland Plants	FACW	Plants that usually occur in wetlands (estimated probability 67% to 99%), but occasionally are found in non-wetlands.
Facultative Plants	FAC	Plants with a similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and non-wetlands.
Facultative Upland Plants	FACU	Plants that usually occur in non-wetlands (estimated probability 67% to 99%) but occasionally are found in wetlands.
Obligate Upland Plants	UPL	Plants that occur almost always (estimated probability greater than 99%) in non-wetlands under natural conditions, but which may also occur rarely in wetlands.

In addition to being dominated by hydrophytic vegetation, each suspect wetland must also exhibit hydric soils and wetland hydrology. As defined in the Federal Register (*Federal Register, Volume 59*: July 13, 1994), "A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part." According to the National Technical Committee for Hydric Soils, documentation of the presence or absence of a hydric soil can only be determined through on-site investigation, not strictly by its classification of an area on soil survey maps. Soils are identified as hydric in the field if they possess certain indicators, as defined in the *Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region.* These field indicators are a regionally specific subset of the field indicators described in the *Field Indicators of Hydric Soils in the United States* (Version 8.0; NRCS, 2016). The absence of a field indicator in a soil does not exclude that soil from being classified as hydric. Soil series, soil color, the presence of mottling or gleying, and depth to water table are

determined and recorded in the field. These features, when present, may indicate a hydric soil when hydric soil field indicators are absent.

Determinations of hydrology are based on observations wetland hydrology indicators. There are two types of indicators, primary indicators and secondary indicators. A determination of wetland hydrology requires the presence of one primary indicator or two secondary indicators. Hydrology indicators are placed into four groups, these being observations of surface water or saturated soils, evidence of recent inundation, evidence of recent soil saturation, or evidence of other site conditions or data. A listing of the wetland hydrology indicators is provided in the table below.

Indicator	Category	
	Primary	Secondary
Group A – Observation of Surface Water or Saturated Soils		
A1 – Surface water	X	
A2 – High water table	X	
A3 – Saturation	X	
Group B – Evidence of Recent Inundation		
B1 – Water marks	X	
B2 – Sediment deposits	X	
B3 – Drift deposits	X	
B4 – Algal mat or crust	X	
B5 – Iron deposits	X	
B7 – Inundation visible on aerial imagery	X	
B8 – Sparsely vegetated concave surface	X	
B9 – Water-stained leaves	X	
B13 – Aquatic fauna	X	
B14 – True aquatic plants	X	
B6 – Surface soil cracks		X
B10 – Drainage patterns		X
Group C – Evidence of Current or Recent Soil Saturation		
C1 – Hydrogen sulfide odor	X	
C3 – Oxidized rhizospheres along living roots	X	
C4 – Presence of reduced iron	X	
C6 – Recent iron reduction in tilled soils	X	
C7 – Thin muck surface	X	
C2 – Dry-season water table		X
C8 – Crayfish burrows		X
C9 – Saturation visible on aerial imagery		X
Group D – Evidence from Other Site Conditions or Data		
D9 – Gauge or well data	X	
D1 – Stunted or stressed plants		X
D2 – Geomorphic position		X
D5 – FAC-neutral test		X

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

FLORISTIC QUALITY ASSESSMENT

Plant communities of the site were evaluated with the Floristic Quality Assessment (FQA) methodology, a widely-used technique used for rapid assessment of the floristic quality in a defined area or plant community. In using FQA, the presence of each plant species is recorded, generating a species inventory. This inventory is entered into computer software that was used to generate the species lists used in this report. Floristic quality calculations are also generated that provides a compilation of various floristic quality data, resulting in a determination of the floristic quality of the subject area.

The floristic quality data for an area partially indicates its quality as a natural area (i.e., relative to known or perceived pre-settlement or disturbance conditions). One indicator of the degree of disturbance or floristic quality in an area is the calculated Native Floristic Quality Index (Native FQI). A high Native FQI value indicates a high-quality natural area, but how high the Native FQI must be for an area to be of high quality is a subjective determination. In general, a wetland (or other defined area) with a Native FQI greater than 20.00 from a single observation may be considered a moderately high quality plant community. These areas have a high potential for containing more conservative or high-quality plant species. Therefore, adverse impacts to such areas, especially wetlands and subsequent proposals for compensatory mitigation, may be scrutinized carefully by the regulatory agencies.

A high number of native species with high coefficients of conservatism "C" (a subjective measure of quality based on habitat specificity and relative tolerance to disturbance; weedy species are highly disturbance tolerant, and are ranked lower) will result in a high Native FQI. The C value is based on the relative rarity of a species and/or the resiliency of a species following disturbance. Coefficients of conservatism for native plant species range from 0 for common, weedy species to 10 for rare, highly conservative species. Adventive species are not assigned a C value. Adventive species are non-native species that have entered the Chicago region since European settlement. These species generally do not lend themselves to increased floristic quality, but instead appear after a disturbance. Thus, a high proportion of these species in a given area or community may be an indication of a lower quality plant community.

The wetness coefficient (W, ranging from -5 to +5) refers to the corresponding wetland indicator status (e.g., OBL = obligate wetland species, -5; FAC = facultative species, 0; UPL = upland species, +5) for U.S. Fish and Wildlife Service Region 3 (Illinois, Michigan, Indiana, Missouri, Iowa, Wisconsin, and Minnesota). A wetland indicator status noted in brackets (e.g., [FACW]) is a modification of the Region 3 indicator status to apply locally in the 22-county Chicago region covered by *Plants of the Chicago Region*. The Wetness coefficient is useful in evaluating the general "wetness" affinity of a sampled plant community. If the average indicator status among all species present is in the FAC, FACW, or OBL classes, then the plant community may be considered hydrophytic.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

HIGH QUALITY AQUATIC RESOURCES

U.S. Army Corps of Engineers, Chicago District Regional Permit Program

High Quality Aquatic Resources (HQARs) include Advanced Identification (ADID) sites (mapped in Kane, Lake and McHenry Counties), bogs, dune and swale complexes, ephemeral pools, fens, forested wetlands, sedge meadows, seeps, streams rated Class A or B in the Illinois Biological Stream Characterization study, wet prairies, wetlands supporting Federal or Illinois endangered or threatened species, and wetlands with a floristic quality index of 20 or greater, or mean C-value of 3.5 or greater. These definitions are listed below. If a given wetland meets one or more of these definitions, that wetland is considered a HQAR and a Category II Regional Permit or Individual Permit is required.

Advanced Identification (ADID) sites: Aquatic sites that have been identified by the Chicago District and U.S. Environmental Protection Agency, in advance of specific permit requests, as areas generally unsuitable for the disposal of dredged or fill material, because of a variety of factors, including high floristic values, water quality or storage functions, or similar wetland functions performed at elevated levels. ADID sites include various Waters of the U.S., including wetlands. An ADID map for the subject property is included with this report as Figure 3.

Bog: A low nutrient peatland, usually in a glacial depression, that is acidic in the surface stratum and often dominated at least in part by the genus *Sphagnum*.

Dune and Swale Complex: Areas usually parallel to the Lake Michigan shoreline and typified by sandy, linear, upland ridges alternating with low-relief wetland created over time during changes in the Lake Michigan's water levels.

Ephemeral pool: A seasonally inundated depression within a forested wetland or upland community, usually located on a moraine, glacial outwash plain, or in an area shallow to bedrock; also known locally as a "vernal pool." These areas may not be permanently vegetated.

Fen: A peatland, herbaceous (including calcareous floating mats) or wooded, with calcareous groundwater flow.

Forested wetland: A wetland dominated by native woody vegetation with at least one of the following species or genera present: *Carya* spp., *Cephalanthus occidentalis*, *Cornus alternifolia*, *Fraxinus nigra*, *Juglans cinerea*, *Nyssa sylvatica*, *Quercus* spp., *Thuja occidentalis, Betula nigra, Betula alleghaniensis, Betula papyrifera, Fagus grandifolia.*.

Sedge meadow: A wetland dominated by at least one of the following genera: *Carex*, *Calamagrostis*, *Cladium*, *Deschampsia*, *Eleocharis*, *Rynchospora*, *Scleria*, or *Eriophorum*.

Seep: A wetland, herbaceous or wooded, with saturated soil or inundation resulting from the diffuse flow of groundwater to the surface stratum. [Seeps typically occur on slopes because of blocked vertical infiltration.]

Streams rated A or B in the Illinois Biological Stream Characterization study: The historical Class A and B rating system was replaced with the new Illinois Department of Natural Resources stream classification system that can be found at:
https://www.dnr.illinois.gov/conservation/BiologicalStreamratings/Pages/default.aspx

Wet prairie: A wetland dominated by native graminoid species with a diverse indigenous forb component that is seasonally saturated and/or temporarily inundated and may resemble a fen in its best development. Species found in a high quality wet prairie include at least one of the following: *Calamagrostis canadensis*, *Spartina pectinata*, *Aster puniceus firmus*, *Beckmannia syzigachne*, *Chelone glabra*, *Eleocharis wolfii*, *Lysimachia quadrifolia*, *Oenothera perennis*, *Oenothera pilosella*, *Pedicularis lanceolata*, and *Solidago ohioensis*.

Wetlands Supporting Federal or Illinois Endangered or Threatened Species: An Agency Action Report is routinely requested from the Illinois Department of Natural Resources (IDNR) and from the U.S. Fish and Wildlife Service (USFWS) for wetland delineations. These reports indicate the likelihood of listed species (that is, those species considered legally protected as threatened or endangered) being found near or on a subject property, or possible encroachment into protected natural area reserves. If a listed species record is indicated for the site, an endangered and threatened species investigation may be required to evaluate the actual presence or absence of the species in question. This inquiry is preliminary and does not preclude the presence of otherwise unrecorded listed species.

Wetlands with a Floristic Quality Index of 20 or greater or a mean C-value of 3.5 or greater: Plant species inventories collected during wetland delineations are used to generate floristic quality values using the Floristic Quality Assessment method published in *Plants of the Chicago Region* (Swink and Wilhelm, 1994). These tables are included in this report for each of the areas identified as wetland.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

STREAM CLASSIFICATION
WITHIN THE CHICAGO DISTRICT

The historical Class A and B rating system was replaced with the new Illinois Department of Natural Resources stream classification system that can be found at:

https://www.dnr.illinois.gov/conservation/BiologicalStreamratings/Pages/default.aspx

APPENDIX V

THREATENED & ENDANGERED SPECIES INFORMATION

EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Applicant: V3 Companies
Contact: Alicia Metzger
Address: 7325 Janes Ave
Woodridge, IL 60517

Project: 24-Acre Palatine Property
Address: 200 E Daniels Road, Palatine

IDNR Project Number: 2010655
Date: 06/17/2020
Alternate Number: 20265

Description: The project proposes to re-develop the existing commercial buildings for commercial purposes.

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

Consultation is terminated. This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Termination does not imply IDNR's authorization or endorsement.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Cook

Township, Range, Section:
42N, 10E, 23

IL Department of Natural Resources Contact
Brian Willard
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Water Quality
1021 N Grand Ave East PO Box 19276
Springfield, Illinois 62794

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Terms of Use

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.

2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.

3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

Security

EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law.

Unauthorized use, tampering with or modification of this system, including supporting hardware or software, may subject the violator to criminal and civil penalties. In the event of unauthorized intrusion, all relevant information regarding possible violation of law may be provided to law enforcement officials.

Privacy

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

U.S. FISH AND WILDLIFE SERVICE: SECTION 7 CONSULTATION

Project: 24-Acre Palatine Property, Palatine, Cook County, Illinois (#20265)

Analysis conducted by: Alicia Metzger, V3 Companies, June 5, 2020

Site Description: The subject property consists of existing commercial/industrial buildings and associated parking lots. Mowed turf grass and a stormwater management feature were also observed.

SPECIES	STATUS	HABITAT	SUITABLE HABITAT PRESENT?	CONCLUSION
Rattlesnake-master borer moth (*Papaipema eryngii*)	Candidate	Undisturbed prairie and woodland openings containing their only food source, rattlesnake-master (*Eryngium yuccifolium*).	No, suitable habitat is not present. There are no undisturbed areas on the subject property.	Species and habitat not present. No further consultation is required.
Eastern massasauga (*Sistrurus catenatus*)	Threatened	Wet areas including wet prairies, marshes, and low areas along rivers and lakes.	No, suitable habitat is not present. There are no wet prairies, rivers or lakes.	Species and habitat not present. No further consultation is required.
Eastern prairie fringed orchid (*Platanthera leucophaea*)	Threatened	Mesic prairies to wetlands such as sedge meadows, marsh edges, and bogs with full sun and little or no woody encroachment.	No, suitable habitat is not present. There are no prairies or wetlands.	Species and habitat not present. No further consultation is required.
Mead's milkweed (*Asclepias meadii*)	Threatened	Mesic to dry mesic upland tallgrass prairie or glade habitat adapted to drought and fire. Persists in stable late-successional prairie.	No, suitable habitat is not present. There are no prairies.	Species and habitat not present. No further consultation is required.
Prairie bush clover (*Lespedeza leptostachya*)	Threatened	Dry to mesic prairies with gravelly soils.	No, suitable habitat is not present. There are no prairies.	Species and habitat not present. No further consultation is required.
Rufa Red knot (*Calidris canutus rufa)*	Threatened	Coastal areas and large wetland complexes during migratory window of May 1-September 30	No, suitable habitat is not present. The subject property is not a coastal area.	Species and habitat not present. No further consultation is required.
Northern long-eared bat (*Myotis septentrionalis*)	Threatened	Small crevices and cavities in caves, mines, and under the bark of dead and live trees.	No, suitable habitat is not present. The trees on the subject property would not support this species.	Species and habitat not present. No further consultation is required.
Piping plover (*Charadrius melodus*)	Endangered	Lakeshore beaches along Lake Michigan.	No, suitable habitat is not present. The subject property is not along Lake Michigan.	Species and habitat not present. No further consultation is required.
Hine's emerald dragonfly (*Somatochlora hineana*)	Endangered	Spring fed wetlands, wet meadows, and marshes within the Designated Critical Habitat areas.	No, suitable habitat is not present. The subject property is not within Designated Critical Habitat.	Species and habitat not present. No further consultation is required.
Leafy-prairie clover (*Dalea foliosa*)	Endangered	Prairie remnants with thin soil over limestone along the Des Plaines River.	No, suitable habitat is not present. There are no prairies.	Species and habitat not present. No further consultation is required.
Rusty patched bumble bee (*Bombus affinis*)	Endangered	Grasslands with flowering plants from April – October, underground rodent cavities or clumps of grasses above ground as nesting sites and undisturbed soil for hibernating queens to overwinter; High Potential Zones	No, suitable habitat is not present. There are no grasslands and subject property is not within the High Potential Zone.	Species and habitat not present. No further consultation is required.

Conclusion: Species and critical habitat are not present. No further consultation is required.

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

APPENDIX VI

HISTORICAL SITE INFORMATION

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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Woodridge, IL 60517
630.724.9200 phone
www.v3co.com

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PROJECT NO.:	20265
CREATED BY:	DJJ
DATE:	06/17/2020
SCALE:	See Scale Bar
CLIENT:	Midwest Industrial Funds 1211 W. 22nd St., Suite 410 Oak Brook, IL 60523
BASE LAYER:	ILHAP Historical Aerial Imagery (1939)
TITLE:	**HISTORICAL AERIAL IMAGERY (1939) MAP**
SITE:	24 Acre Palatine Property Palatine, Cook County, Illinois
FIGURE:	A

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Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT NO.:	20265
CREATED BY:	DJJ
DATE:	06/17/2020
SCALE:	See Scale Bar

CLIENT:
Midwest Industrial Funds
1211 W. 22nd St., Suite 410
Oak Brook, IL 60523

BASE LAYER:
Cook County
Aerial Imagery
(1998)

TITLE:
HISTORICAL AERIAL IMAGERY (1998) MAP

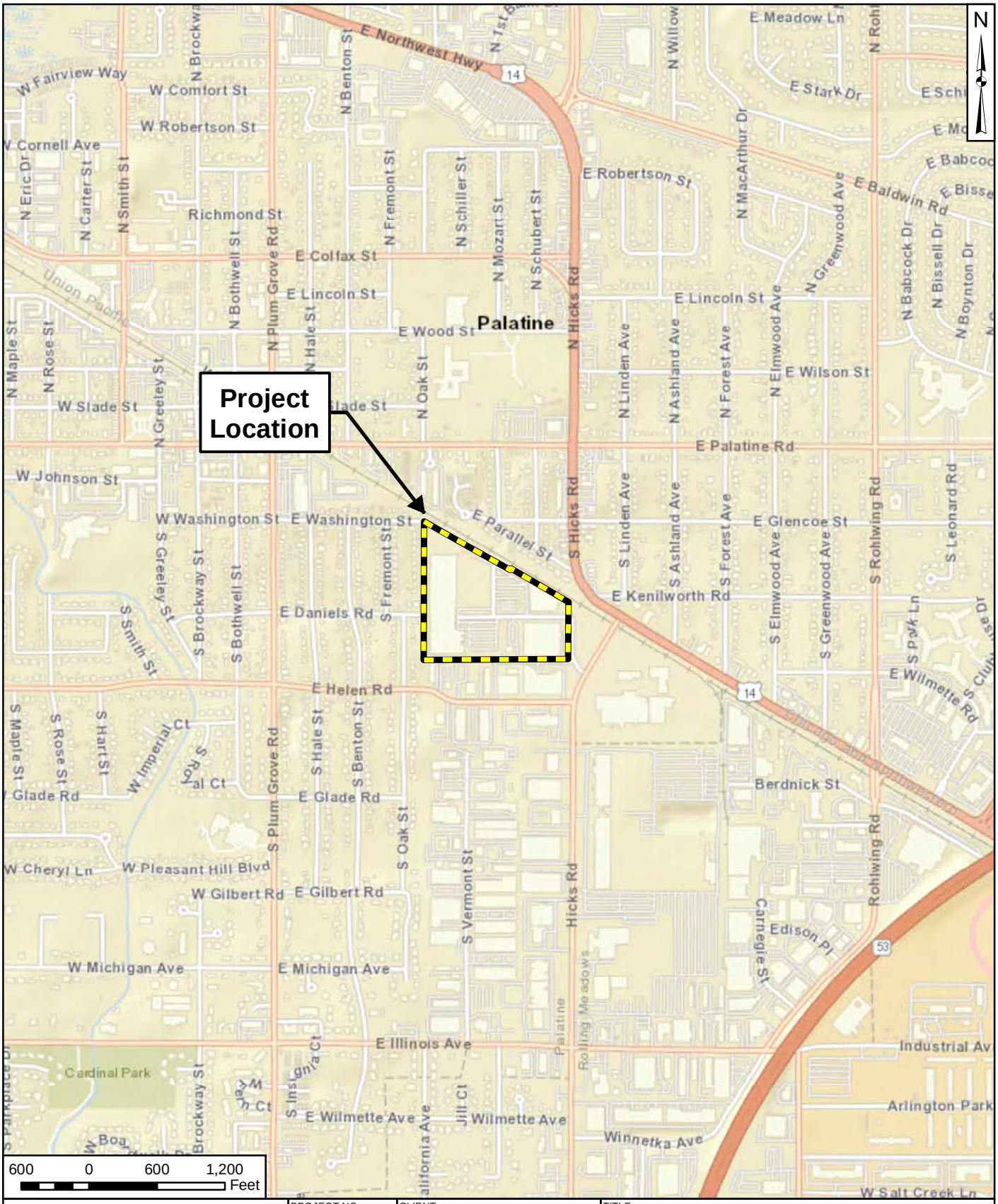
SITE:
24 Acre Palatine Property
Palatine, Cook County, Illinois

FIGURE:
C

N:\2020\20265\Drawings\ArcGIS\NR\Historical\FIGChist20265.mxd

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

FIGURES



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PROJECT NO.: 20265	CLIENT: Midwest Industrial Funds 1211 W. 22nd St., Suite 410 Oak Brook, IL 60523	TITLE: **PROJECT LOCATION MAP**	
CREATED BY: DJJ			
DATE: 06/04/2020	BASE LAYER: ESRI World Street Map	SITE: 24 Acre Palatine Property Palatine, Cook County, Illinois	FIGURE: 1
SCALE: See Scale Bar			

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Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT NO.:	20265
CREATED BY:	DJJ
DATE:	06/01/2020
SCALE:	See Scale Bar
CLIENT:	Midwest Industrial Funds 1211 W. 22nd St., Suite 410 Oak Brook, IL 60523
BASE LAYER:	USGS Topographic Map Palatine Quad. (1998)
TITLE:	**NATIONAL WETLAND INVENTORY (NWI) MAP**
SITE:	24 Acre Palatine Property Palatine, Cook County, Illinois
FIGURE:	2

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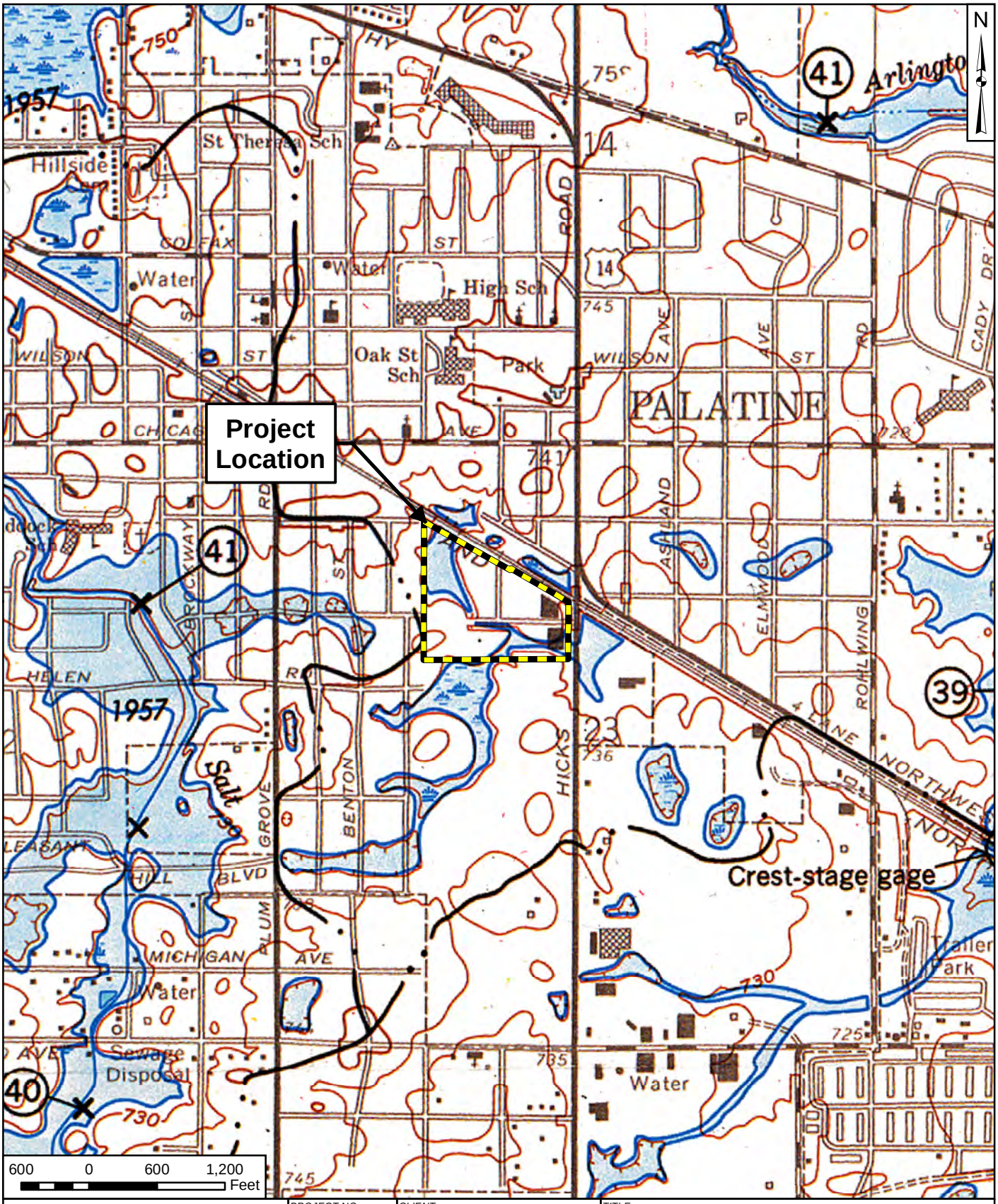
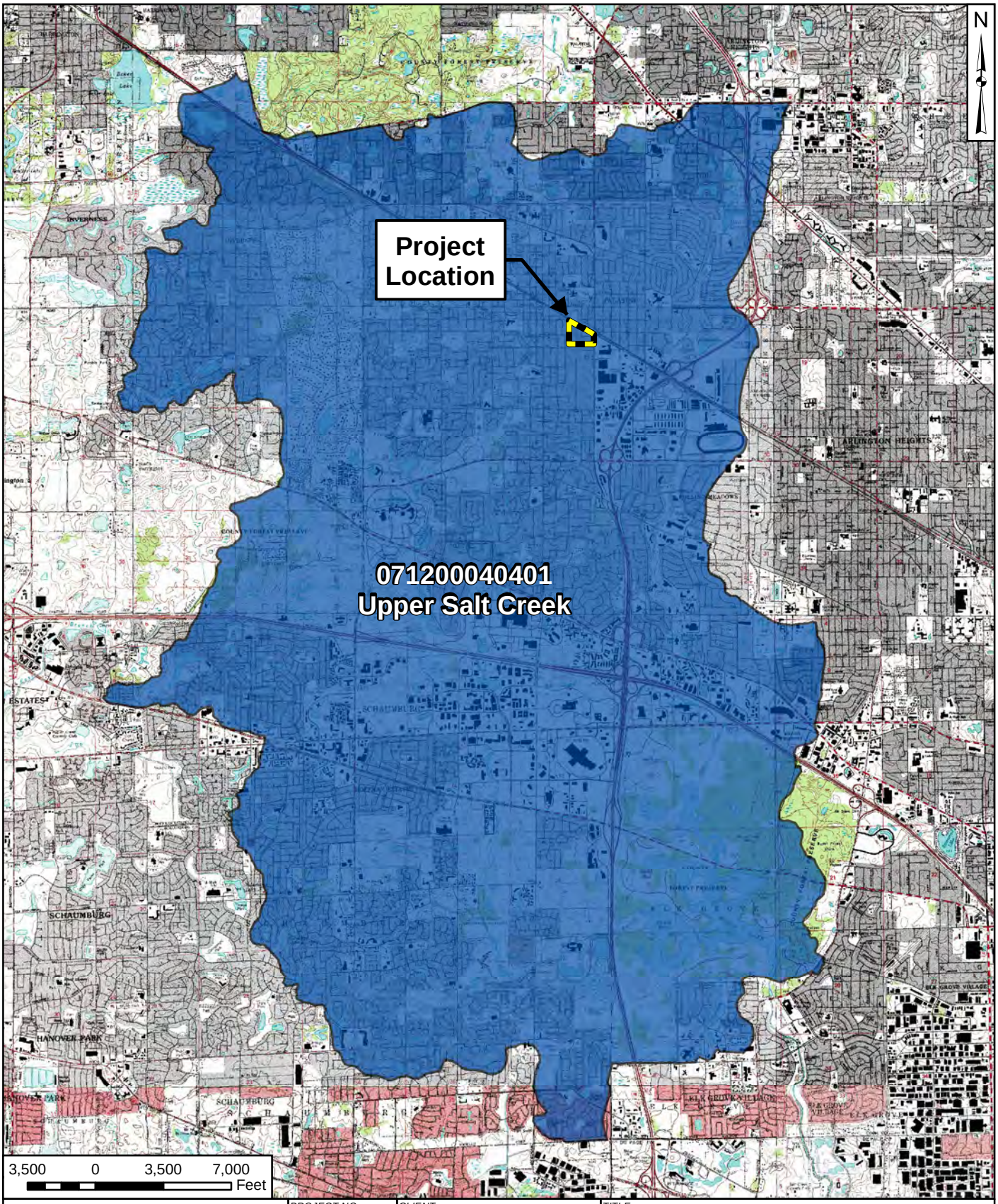
Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone www.v3co.com	PROJECT NO.: 20265 CREATED BY: DJJ	CLIENT: Midwest Industrial Funds 1211 W. 22nd St., Suite 410 Oak Brook, IL 60523	TITLE: **USGS HYDROLOGIC ATLAS**
	DATE: 06/01/2020	BASE LAYER: USGS Hydrologic Atlas Palatine Quad. (1964)	SITE: 24 Acre Palatine Property Palatine, Cook County, Illinois FIGURE: 3
Visio, Vertere, Virtute... *"The Vision To Transform with Excellence"*	SCALE: See Scale Bar		

N:\2020\20265\Drawings\ArcGIS\MXD\Fig3_Hydro.mxd

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



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PROJECT NO.: 20265	CLIENT: Midwest Industrial Funds 1211 W. 22nd St., Suite 410 Oak Brook, IL 60523	TITLE: **12-DIGIT HYDROLOGIC UNIT CODE (HUC) MAP**	
CREATED BY: DJJ			
DATE: 06/01/2020	BASE LAYER: USGS Topographic Map Cook County (2002)	SITE: 24 Acre Palatine Property Palatine, Cook County, Illinois	FIGURE: 4
SCALE: See Scale Bar			

N:\2020\20265\Drawings\ArcGIS\NBI\Fig4_Huc.mxd

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

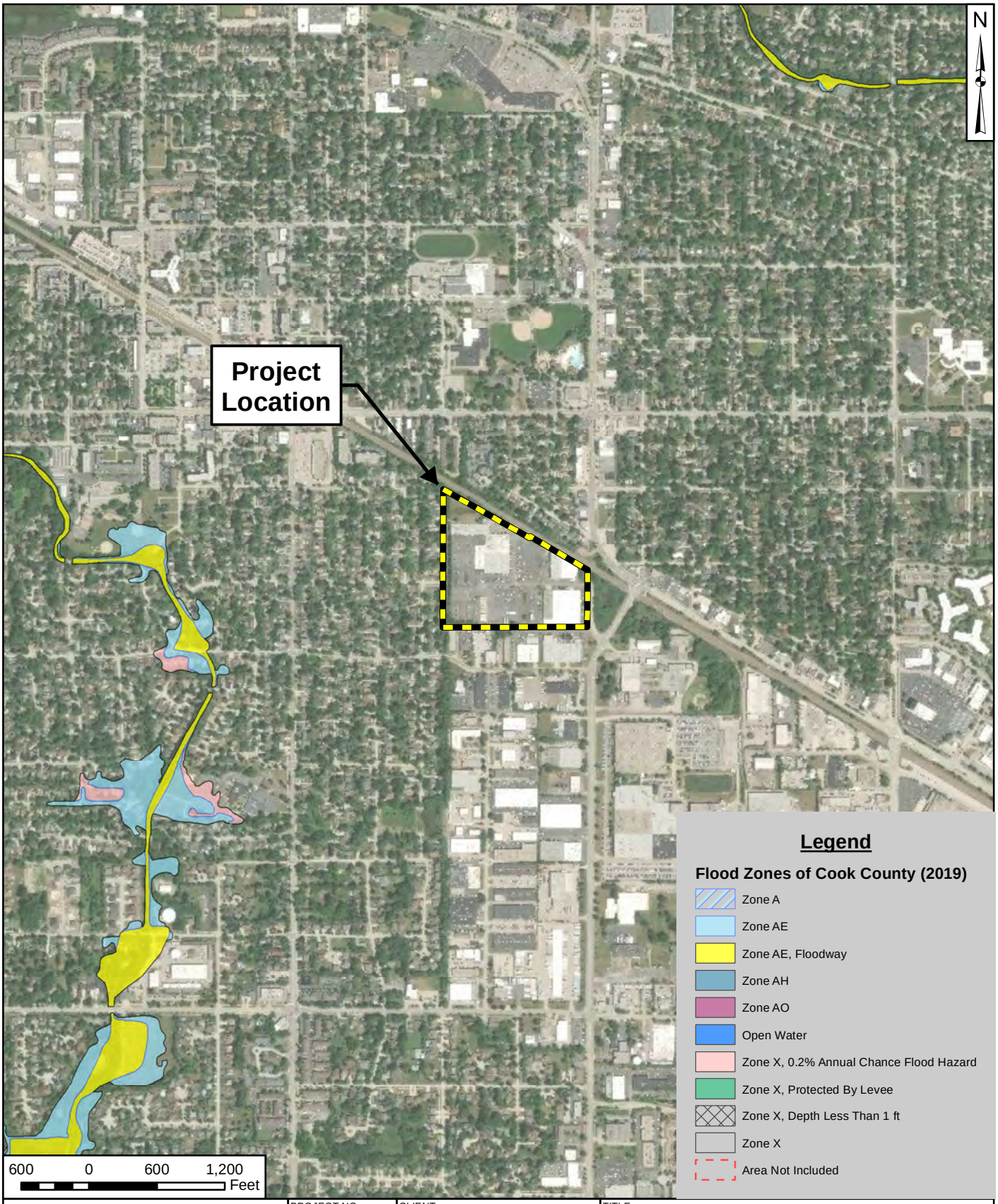
7325 Janes Avenue
Woodridge, IL 60517
630.724.9200 phone
www.v3co.com

Visio, Vertere, Virtute...
"The Vision To Transform with Excellence"

PROJECT NO.: 20265	CLIENT: Midwest Industrial Funds 1211 W. 22nd St., Suite 410 Oak Brook, IL 60523	TITLE: **FEMA FLOOD INSURANCE RATE MAP (FIRM)**	
CREATED BY: DJJ			
DATE: 06/01/2020	BASE LAYER: FEMA FIRM Panel 17031C0182J	SITE: 24 Acre Palatine Property Palatine, Cook County, Illinois	FIGURE: 5
SCALE: See Scale Bar			

N:\2020\20265\Drawings\ArcGIS\MD\Fig5_Firm.mxd

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



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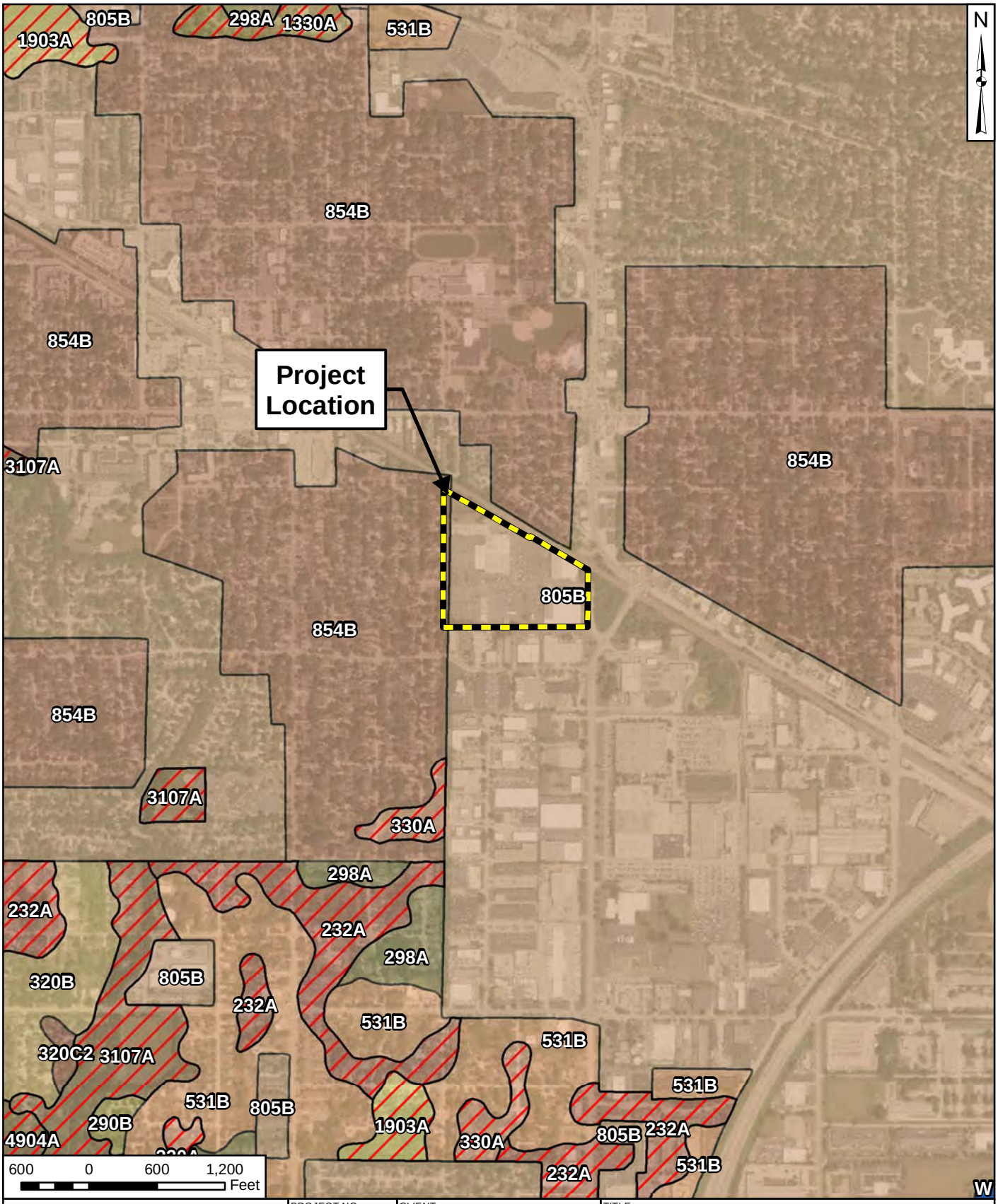
PROJECT NO.:	20265
CREATED BY:	DJJ
DATE:	06/01/2020
SCALE:	See Scale Bar
CLIENT:	Midwest Industrial Funds 1211 W. 22nd St., Suite 410 Oak Brook, IL 60523
BASE LAYER:	Digital Global (2018)
TITLE:	**FLOOD ZONES OF COOK COUNTY, ILLINOIS (2019) MAP**
SITE:	24 Acre Palatine Property Palatine, Cook County, Illinois
FIGURE:	6

N:\2020\20265\Drawings\ArcGIS\MDIFig6_Pfm.mxd

Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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PROJECT NO.:	20265
CREATED BY:	DJJ
DATE:	06/01/2020
SCALE:	See Scale Bar
CLIENT:	Midwest Industrial Funds 1211 W. 22nd St., Suite 410 Oak Brook, IL 60523
BASE LAYER:	Digital Global (2018)

TITLE: **SOIL SURVEY OF COOK COUNTY, ILLINOIS MAP**

SITE: 24 Acre Palatine Property
Palatine, Cook County, Illinois

FIGURE: 7

N:\2020\20265\Drawings\ArcGIS\MP\Fig7_SoilLayout

Legend

Data Points

Man-Made Drainage Feature (0.56 acres)

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PROJECT NO.: 20265	CLIENT: Midwest Industrial Funds 1211 W. 22nd St., Suite 410 Oak Brook, IL 60523	TITLE: **WETLAND DELINEATION MAP**	
CREATED BY: DJJ			
DATE: 06/17/2020	BASE LAYER: Cook County Aerial (2018)	SITE: 24 Acre Palatine Property Palatine, Cook County, Illinois	FIGURE: 8
SCALE: See Scale Bar			

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Attachment: Wetland Delineation Report_20265 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

Legend

Data Points

Man-Made Drainage Feature (0.56 acres)

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PROJECT NO.: 20265	CLIENT: Midwest Industrial Funds 1211 W. 22nd St., Suite 410 Oak Brook, IL 60523	TITLE: **WETLAND DELINEATION MAP**	
CREATED BY: DJJ			
DATE: 06/17/2020	BASE LAYER: Cook County Aerial (2018)	SITE: 24 Acre Palatine Property Palatine, Cook County, Illinois	FIGURE: 8
SCALE: See Scale Bar			

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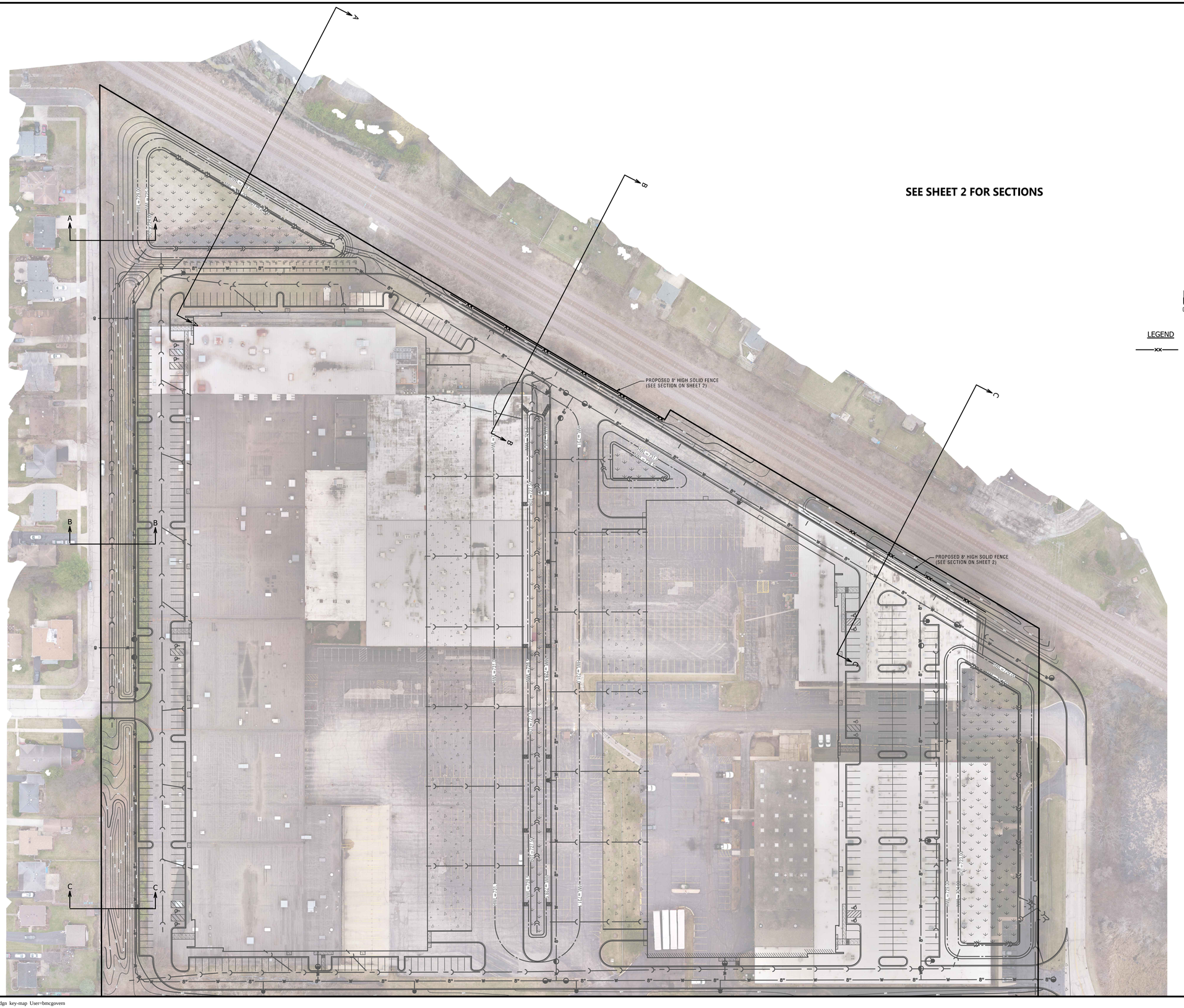
Attachment: Wetland Map (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)



NO.	DATE	REMARKS

NO.	DATE	REMARKS

CROSS SECTION EXHIBIT

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

FILENAME: 11061EXH-XSEC

DATE: 10/13/20

JOB NO. 11061

SHEET **EXH**
1 OF 2

Attachment: Cross Section (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

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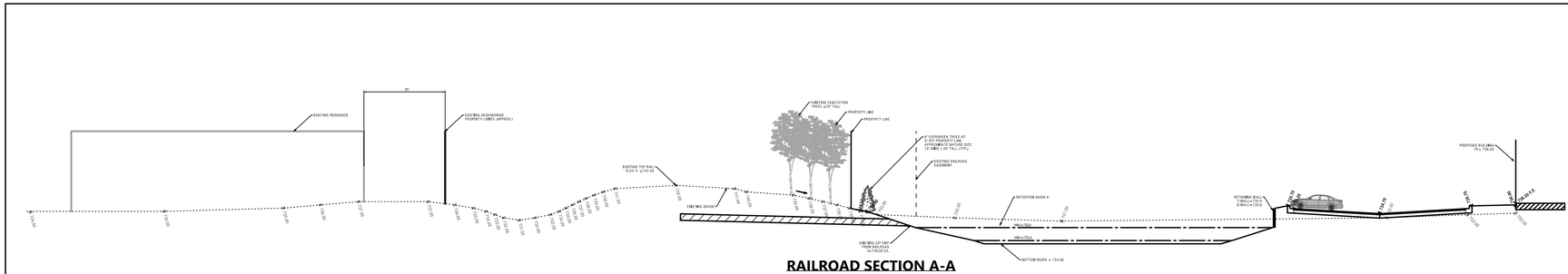
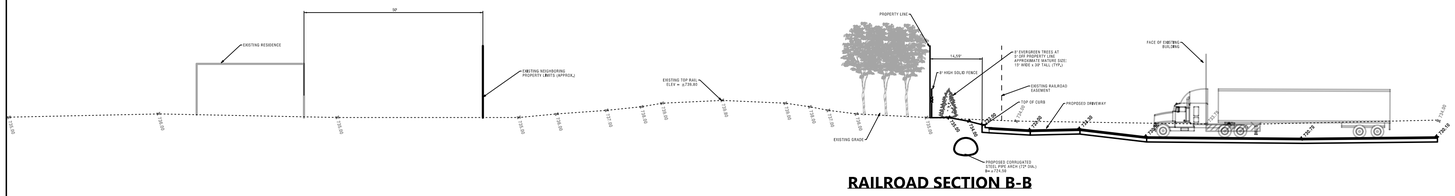
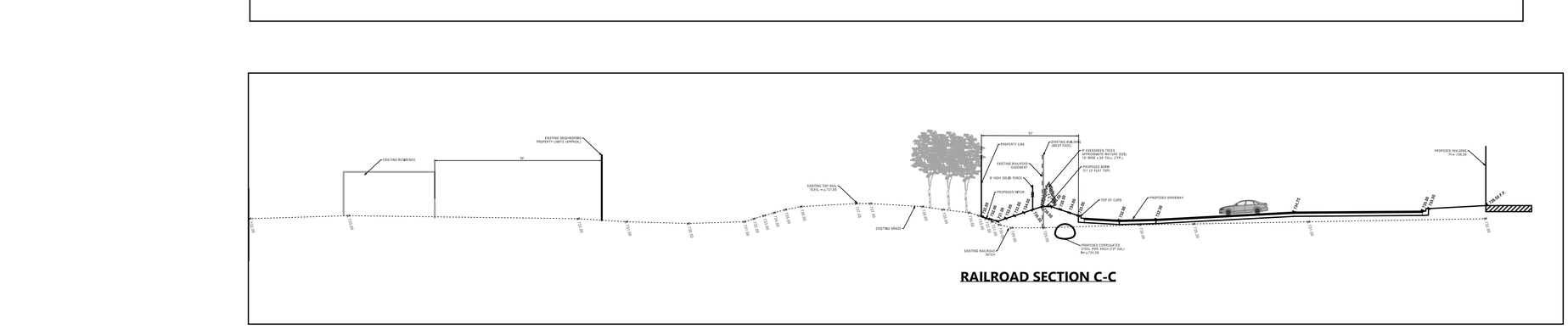


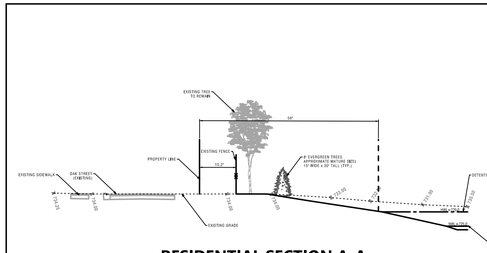
RAILROAD SECTION A-A



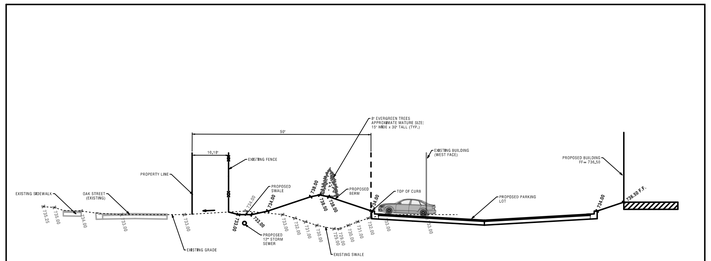
RAILROAD SECTION B-B



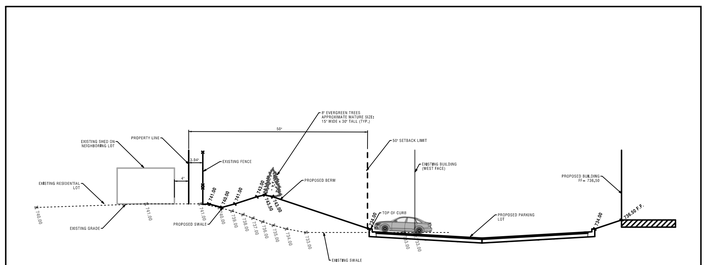
RAILROAD SECTION C-C



RESIDENTIAL SECTION A-A



RESIDENTIAL SECTION B-B



RESIDENTIAL SECTION C-C

NO.	DATE	REMARKS

NO.	DATE	REMARKS

CROSS SECTION EXHIBIT

PALATINE CORPORATE CENTER
PALATINE, ILLINOIS

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

SPACECO INC.

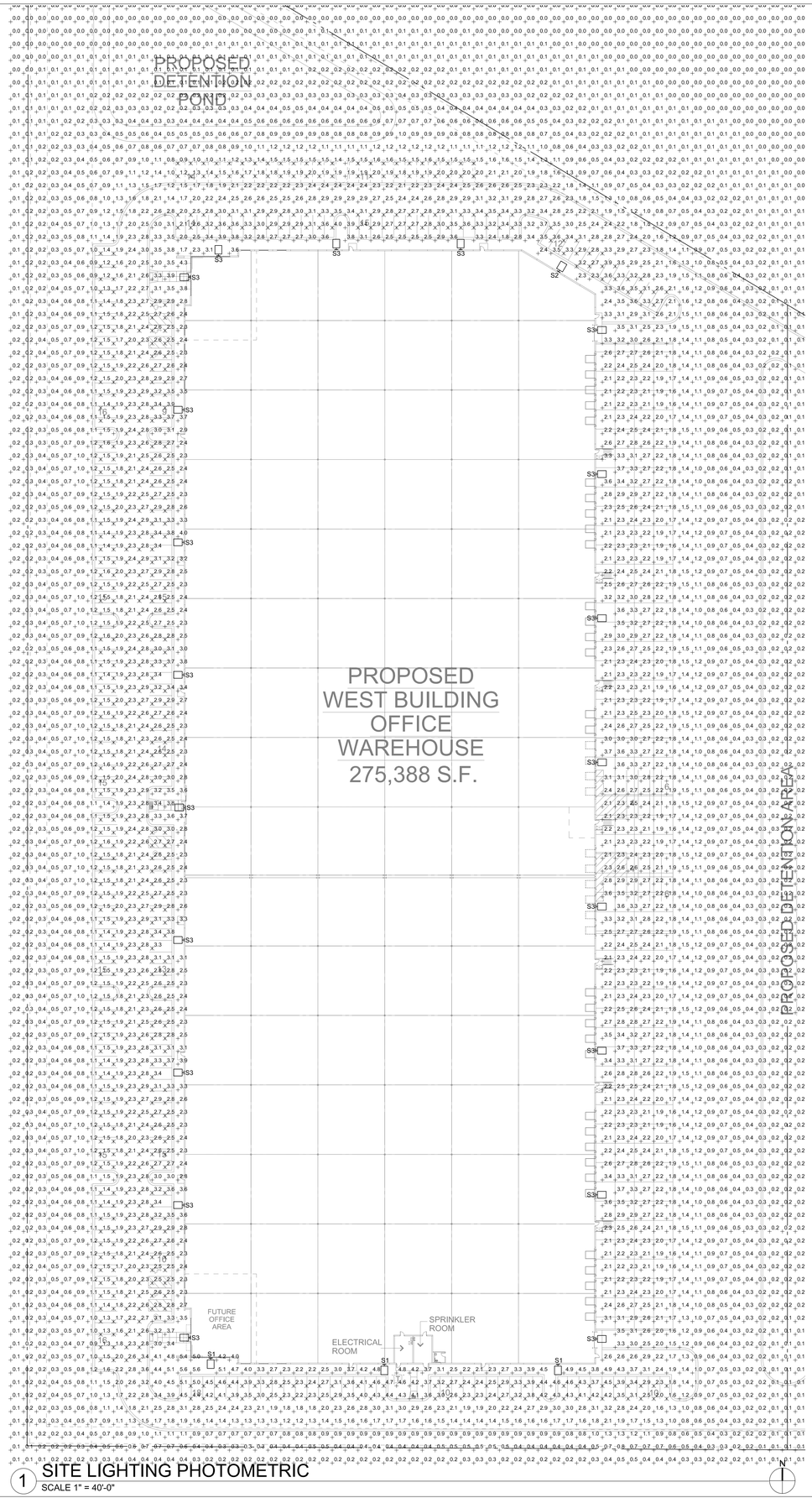
FILENAME: 11061EXH-XSEC

DATE: 10/13/20

JOB NO. 11061

SHEET **EXH**
2 OF 2

Attachment: Cross Section (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

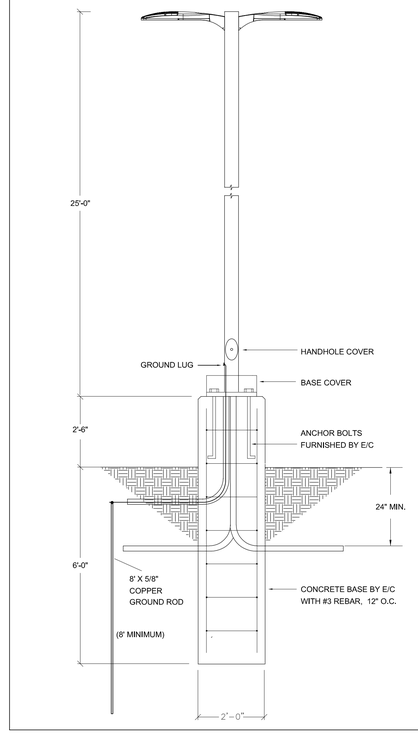


1 SITE LIGHTING PHOTOMETRIC
SCALE 1" = 40'-0"

PHOTOMETRIC STATISTICS

	AVERAGE	MINIMUM	UNIFORMITY RATIO
CAR PARKING NORTH	3.1fc	2.0fc	1.6:1
CAR PARKING SOUTH	3.3fc	1.6fc	2.1:1
CAR PARKING WEST	2.3fc	1.2fc	1.9:1

POLE BASE DETAIL (NTS)



WEST SITE LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MODEL	TOTAL VA	VOLTS
S1		LED WALL MOUNTED FIXTURE (TYPE II DISTRIBUTION)	LITHONIA (OR EQUAL) DSX1-LED-P9-50K-T2S-MVOLT-WBA-DDBXD	241	277V 1P 2W
S2		LED WALL MOUNTED FIXTURE (TYPE III DISTRIBUTION)	LITHONIA (OR EQUAL) DSX1-LED-P9-50K-T3M-MVOLT-WBA-DDBXD	241	277V 1P 2W
S3		LED WALL MOUNTED FIXTURE (TYPE IV DISTRIBUTION)	LITHONIA (OR EQUAL) DSX1-LED-P9-50K-T4M-MVOLT-WBA-DDBXD	241	277V 1P 2W

CONNELLY
ELECTRIC
40 S. ADDISON ROAD
ADDISON, IL 60101
630-543-9059
www.connellyelectric.com

NO.	DESCRIPTION	DATE
0	ISSUED FOR PERMIT	09/25/2020

MIDWEST INDUSTRIAL FUNDS - PALATINE DEVELOPMENT - WEST BUILDING

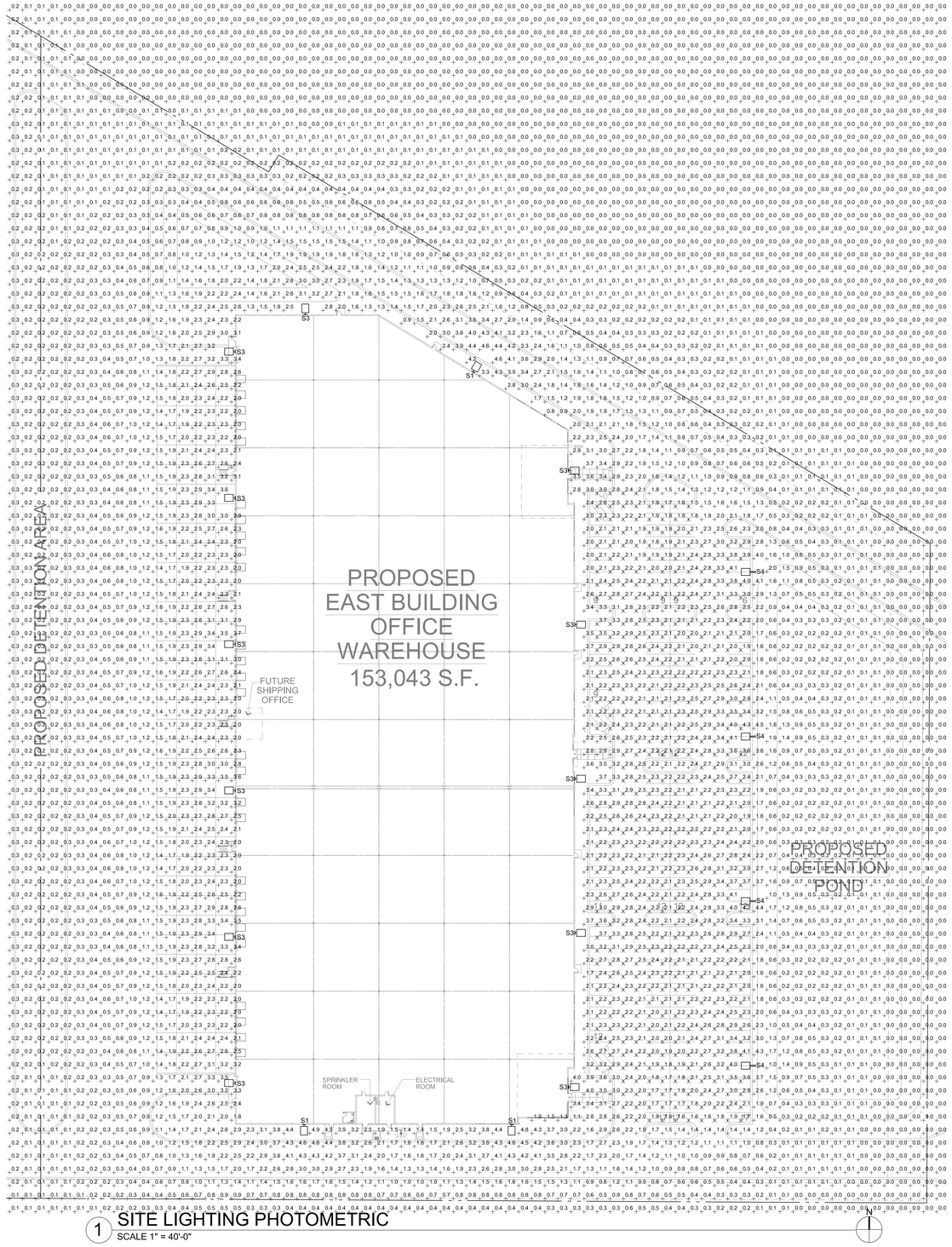
SELLSTROM DRIVE
PALATINE, IL

SITE LIGHTING PHOTOMETRIC

PROJECT NUMBER	20-0000
DATE	09/25/2020
DRAWN BY	TMF
CHECKED BY	JJC

E101

Attachment: Preliminary Photometric plan (200, 300, and 350 E. Daniels Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

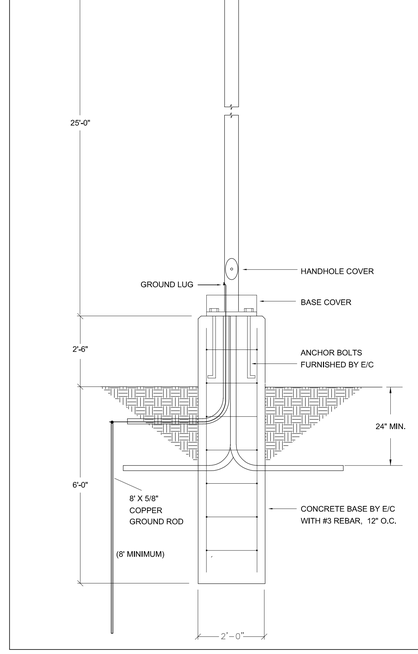


1 SITE LIGHTING PHOTOMETRIC
SCALE 1" = 40'-0"

PHOTOMETRIC STATISTICS

	AVERAGE	MINIMUM	UNIFORMITY RATIO
CAR PARKING	2.4fc	1.5fc	1.6:1

POLE BASE DETAIL (NTS)



EAST SITE LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MODEL	TOTAL VA	VOLTS
S1		LED WALL MOUNTED FIXTURE (TYPE II DISTRIBUTION)	LITHONIA (OR EQUAL) DSX1-LED-P9-50K-T2S-MVOLT-WBA-DDBXD	241	277V 1P 2W
S3		LED WALL MOUNTED FIXTURE (TYPE IV DISTRIBUTION)	LITHONIA (OR EQUAL) DSX1-LED-P9-50K-T4M-MVOLT-WBA-DDBXD	241	277V 1P 2W
S4		LED FIXTURE MOUNTED ON 25' POLE (TYPE IV DISTRIBUTION)	LITHONIA (OR EQUAL) DSX1-LED-P9-50K-T4M-MVOLT-SPA-DDBXD POLE: SSS-25-4C-DM19AS-DDBXD	241	277V 1P 2W

CONNELLY
ELECTRIC
40 S. ADDISON ROAD
ADDISON, IL 60101
630-543-9059
www.connellyelectric.com

NO.	DESCRIPTION	DATE
0	ISSUED FOR PERMIT	09/25/2020

MIDWEST INDUSTRIAL FUNDS - PALATINE DEVELOPMENT - EAST BUILDING

SELLSTROM DRIVE
PALATINE, IL

SITE LIGHTING PHOTOMETRIC

PROJECT NUMBER	20-0000
DATE	09/25/2020
DRAWN BY	TMF
CHECKED BY	JJC

E101

Attachment: Preliminary Photometric plan (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

CONNELLY ELECTRIC

SITE LIGHTING DEVICE SUBMITTAL FOR:

MIF – PALATINE DEVELOPMENT

MIDWEST INDUSTRIAL FUND

40 S. Addison Rd. • Suite 100 • Addison, IL 60101 • P: (630) 543-9059 • F: (630) 543-9077
www.connellyelectric.com

Attachment: Site Lighting Fixture Submittal_09.25.2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

D-Series Size 1
LED Area Luminaire

Catalog Number: DSX1 LED-P9-50K-T2S-MVOLT-WBA-DDBXD

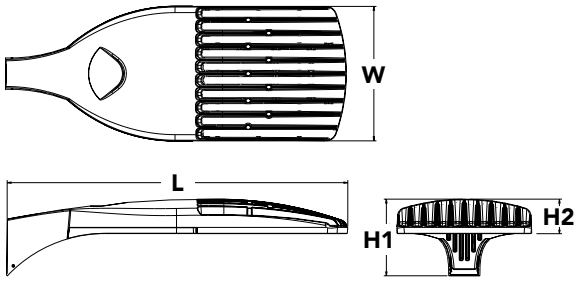
Notes: S1 Fixture

Type:

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED	P9	50K	T2S	MVOLT	WBA
Series	**LEDs**	**Color temperature**	**Distribution**	**Voltage**	**Mounting**

Series
- DSX1 LED

LEDs
- **Forward optics**
- P1, P2, P3, P4[1], P5[1], P6[1], P7[1], P8, P9[1]
- **Rotated optics**
- P10[2], P11[2], P12[2], P13[1,2]

Color temperature
- 30K 3000 K
- 40K 4000 K
- 50K 5000 K

Distribution
- T1S Type I short (Automotive)
- T2S Type II short
- T2M Type II medium
- T3S Type III short
- T3M Type III medium
- T4M Type IV medium
- TFTM Forward throw medium
- T5VS Type V very short[3]
- T5S Type V short[3]
- T5M Type V medium[3]
- T5W Type V wide[3]
- BLC Backlight control[4]
- LCCO Left corner cutoff[4]
- RCCO Right corner cutoff[4]

Voltage
- MVOLT[5]
- 120[6]
- 208[6]
- 240[6]
- 277[6]
- 347[6]
- 480[6]

Mounting
- **Shipped included**
- SPA Square pole mounting
- RPA Round pole mounting[7]
- WBA Wall bracket[3]
- SPUMBA Square pole universal mounting adaptor[8]
- RPUMBA Round pole universal mounting adaptor[8]
- **Shipped separately**
- KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[9]

DDBXD

Control options

Shipped installed
- NLTAIR2 nLight AIR generation 2 enabled[10]
- PIRHN Network, high/low motion/ambient sensor[11]
- PER NEMA twist-lock receptacle only (controls ordered separate)[12]
- PER5 Five-pin receptacle only (controls ordered separate)[12,13]
- PER7 Seven-pin receptacle only (controls ordered separate)[12,13]
- DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[14]
- DS Dual switching[15,16,17]
- PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[17,18]
- PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[17,18]
- PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[17,18]
- PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[17,18]
- FAO Field adjustable output[17,19]

Other options

Shipped installed
- HS House-side shield[20]
- SF Single fuse (120, 277, 347V)[6]
- DF Double fuse (208, 240, 480V)[6]
- L90 Left rotated optics[2]
- R90 Right rotated optics[2]
- HA 50°C ambient operations[1]
- **Shipped separately**
- BS Bird spikes[21]
- EGS External glare shield

Finish *(required)*
- DDBXD Dark bronze
- DBLXD Black
- DNAXD Natural aluminum
- DWHXD White
- DDBTXD Textured dark bronze
- DBLBXD Textured black
- DNATXD Textured natural aluminum
- DWHGXD Textured white

Attachment: Site Lighting Fixture Submittal_09.25.2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

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Ordering Information

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [22]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [22]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [22]
DSHORT SBK U	Shorting cap [22]
DSX1HS 30C U	House-side shield for P1, P2, P3, P4 and P5 [20]
DSX1HS 40C U	House-side shield for P6 and P7 [20]
DSX1HS 60C U	House-side shield for P8, P9, P10, P11 and P12 [20]
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish) [23]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [9]
DSX1EGS (FINISH) U	External glare shield

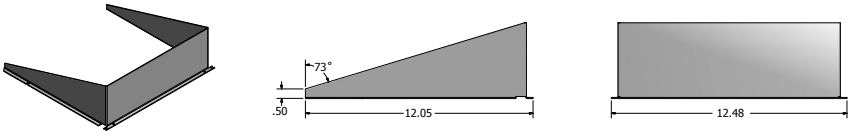
For more control options, visit DTL and ROAM online.

NOTES

1 HA not available with P4, P5, P6, P7, P9 and P13.
2 P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
3 Any Type 5 distribution with photocell, is not available with WBA.
4 Not available with HS.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
6 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
7 Suitable for mounting to round poles between 3.5" and 12" diameter.
8 Universal mounting brackets intended for retrofit on existing, pre-drilled poles only. 1.5 G vibration load rating per ANCI C136.31. Only usable when pole's drill pattern is NOT Lithonia templa #8
9 Must order fixture with SPA option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" diameter mast arm (not included).
10 Must be ordered with PIRHN. Sensor cover available only in dark bronze, black, white and natural aluminum colors.
11 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this link.
12 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting cap included.
13 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Node with integral dimming.
14 DMG not available with PIRHN, PER5, PER7, PIR, PIRH, PIR1FC3V or PIRH1FC3V, FAO.
15 Provides 50/50fixture operation via (2) independent drivers. Not available with PER, PER5, PER7, PIR or PIRH. Not available P1, P2, P3, P4 or P5.
16 Requires (2) separately switched circuits with isolated neutrol.
17 Reference Controls Option Default settings table on page 4.
18 Reference Motion Sensor table on page 4 to see functionality.
19 Not available with other dimming controls options
20 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
21 Must be ordered with fixture for factory pre-drilling.
22 Requires luminaire to be specified with PER, PER5 or PER7 option. See Control Option Table on page 4.
23 For retrofit use only. Only usable when pole's drill pattern is NOT Lithonia template #8

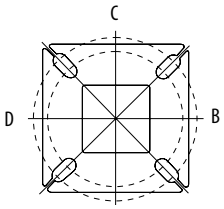
Options

EGS - External Glare Shield

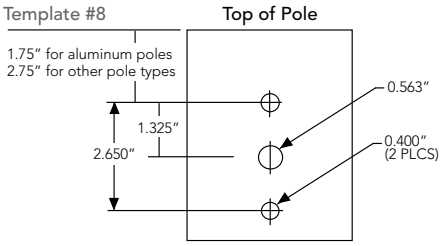


Drilling

HANDHOLE ORIENTATION



Template #8



Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS

DSX1 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 LED	1.013	2.025	1.945	3.038	2.850	3.749

	Drilling Template	Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"	3.5"	4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

Attachment: Site Lighting Fixture Submittal_09.25.2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

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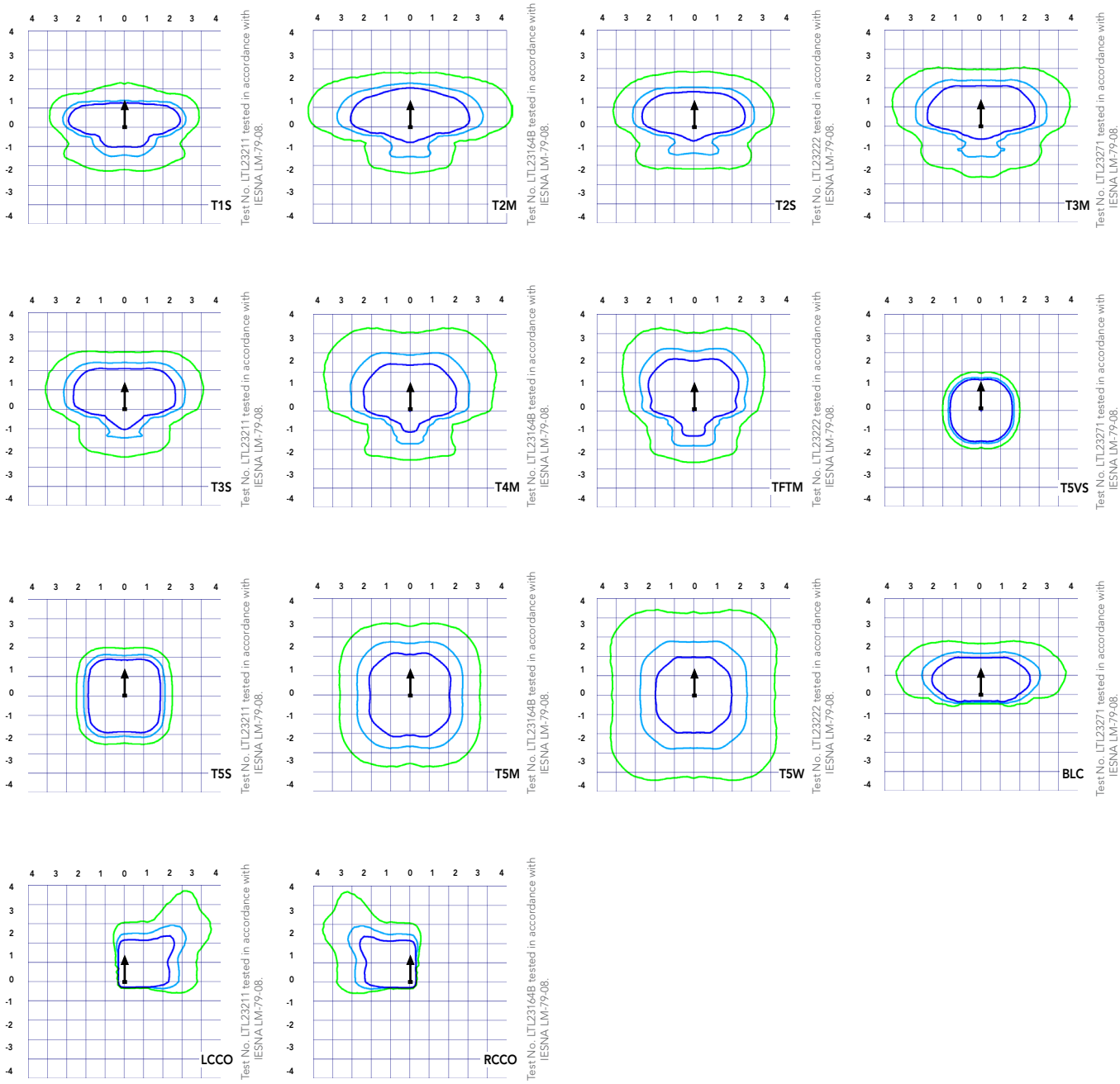
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 1 homepage.

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').

LEGEND
- 0.1 fc
- 0.5 fc
- 1.0 fc



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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.96
50,000	0.92
100,000	0.85

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Phototcell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use when motion sensor is used as dusk to dawn control.						

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	530	54	0.45	0.26	0.23	0.19	0.10	0.12
	P2	30	700	70	0.59	0.34	0.30	0.25	0.20	0.16
	P3	30	1050	102	0.86	0.50	0.44	0.38	0.30	0.22
	P4	30	1250	125	1.06	0.60	0.52	0.46	0.37	0.27
	P5	30	1400	138	1.16	0.67	0.58	0.51	0.40	0.29
	P6	40	1250	163	1.36	0.78	0.68	0.59	0.47	0.34
	P7	40	1400	183	1.53	0.88	0.76	0.66	0.53	0.38
	P8	60	1050	207	1.74	0.98	0.87	0.76	0.64	0.49
	P9	60	1250	241	2.01	1.16	1.01	0.89	0.70	0.51
Rotated Optics (Requires L90 or R90)	P10	60	530	106	0.90	0.52	0.47	0.43	0.33	0.27
	P11	60	700	137	1.15	0.67	0.60	0.53	0.42	0.32
	P12	60	1050	207	1.74	0.99	0.87	0.76	0.60	0.46
	P13	60	1250	231	1.93	1.12	0.97	0.86	0.67	0.49

Controls Options				
Nomenclature	**Description**	**Functionality**	**Primary control device**	**Notes**
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell recepticle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell. PIR for 8-15' mounting; PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBGR	Also available with PIRH1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSDGR	nLight AIR sensors can be programmed and commissione from the ground using the CIAIRity Pro app.

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Performance Data

Lumen Output

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Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	**P1**	54W	T1S	6,457	2	0	2	120	6,956	2	0	2	129	7,044	2	0	2	130
				T2S	6,450	2	0	2	119	6,949	2	0	2	129	7,037	2	0	2	130
				T2M	6,483	1	0	1	120	6,984	2	0	2	129	7,073	2	0	2	131
				T3S	6,279	2	0	2	116	6,764	2	0	2	125	6,850	2	0	2	127
				T3M	6,468	1	0	2	120	6,967	1	0	2	129	7,056	1	0	2	131
				T4M	6,327	1	0	2	117	6,816	1	0	2	126	6,902	1	0	2	128
				TFTM	6,464	1	0	2	120	6,963	1	0	2	129	7,051	1	0	2	131
				T5VS	6,722	2	0	0	124	7,242	3	0	0	134	7,334	3	0	0	136
				T5S	6,728	2	0	1	125	7,248	2	0	1	134	7,340	2	0	1	136
				T5M	6,711	3	0	1	124	7,229	3	0	1	134	7,321	3	0	2	136
				T5W	6,667	3	0	2	123	7,182	3	0	2	133	7,273	3	0	2	135
				BLC	5,299	1	0	1	98	5,709	1	0	2	106	5,781	1	0	2	107
				LCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
				RCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
30	700	**P2**	70W	T1S	8,249	2	0	2	118	8,886	2	0	2	127	8,999	2	0	2	129
				T2S	8,240	2	0	2	118	8,877	2	0	2	127	8,989	2	0	2	128
				T2M	8,283	2	0	2	118	8,923	2	0	2	127	9,036	2	0	2	129
				T3S	8,021	2	0	2	115	8,641	2	0	2	123	8,751	2	0	2	125
				T3M	8,263	2	0	2	118	8,901	2	0	2	127	9,014	2	0	2	129
				T4M	8,083	2	0	2	115	8,708	2	0	2	124	8,818	2	0	2	126
				TFTM	8,257	2	0	2	118	8,896	2	0	2	127	9,008	2	0	2	129
				T5VS	8,588	3	0	0	123	9,252	3	0	0	132	9,369	3	0	0	134
				T5S	8,595	3	0	1	123	9,259	3	0	1	132	9,376	3	0	1	134
				T5M	8,573	3	0	2	122	9,236	3	0	2	132	9,353	3	0	2	134
				T5W	8,517	3	0	2	122	9,175	4	0	2	131	9,291	4	0	2	133
				BLC	6,770	1	0	2	97	7,293	1	0	2	104	7,386	1	0	2	106
				LCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
				RCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
30	1050	**P3**	102W	T1S	11,661	2	0	2	114	12,562	3	0	3	123	12,721	3	0	3	125
				T2S	11,648	2	0	2	114	12,548	3	0	3	123	12,707	3	0	3	125
				T2M	11,708	2	0	2	115	12,613	2	0	2	124	12,773	2	0	2	125
				T3S	11,339	2	0	2	111	12,215	3	0	3	120	12,370	3	0	3	121
				T3M	11,680	2	0	2	115	12,582	2	0	2	123	12,742	2	0	2	125
				T4M	11,426	2	0	3	112	12,309	2	0	3	121	12,465	2	0	3	122
				TFTM	11,673	2	0	2	114	12,575	2	0	3	123	12,734	2	0	3	125
				T5VS	12,140	3	0	1	119	13,078	3	0	1	128	13,244	3	0	1	130
				T5S	12,150	3	0	1	119	13,089	3	0	1	128	13,254	3	0	1	130
				T5M	12,119	4	0	2	119	13,056	4	0	2	128	13,221	4	0	2	130
				T5W	12,040	4	0	3	118	12,970	4	0	3	127	13,134	4	0	3	129
				BLC	9,570	1	0	2	94	10,310	1	0	2	101	10,440	1	0	2	102
				LCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
				RCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
30	1250	**P4**	125W	T1S	13,435	3	0	3	107	14,473	3	0	3	116	14,657	3	0	3	117
				T2S	13,421	3	0	3	107	14,458	3	0	3	116	14,641	3	0	3	117
				T2M	13,490	2	0	2	108	14,532	3	0	3	116	14,716	3	0	3	118
				T3S	13,064	3	0	3	105	14,074	3	0	3	113	14,252	3	0	3	114
				T3M	13,457	2	0	2	108	14,497	2	0	2	116	14,681	2	0	2	117
				T4M	13,165	2	0	3	105	14,182	2	0	3	113	14,362	2	0	3	115
				TFTM	13,449	2	0	3	108	14,488	2	0	3	116	14,672	2	0	3	117
				T5VS	13,987	4	0	1	112	15,068	4	0	1	121	15,259	4	0	1	122
				T5S	13,999	3	0	1	112	15,080	3	0	1	121	15,271	3	0	1	122
				T5M	13,963	4	0	2	112	15,042	4	0	2	120	15,233	4	0	2	122
				T5W	13,872	4	0	3	111	14,944	4	0	3	120	15,133	4	0	3	121
				BLC	11,027	1	0	2	88	11,879	1	0	2	95	12,029	1	0	2	96
				LCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
				RCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
30	1400	**P5**	138W	T1S	14,679	3	0	3	106	15,814	3	0	3	115	16,014	3	0	3	116
				T2S	14,664	3	0	3	106	15,797	3	0	3	114	15,997	3	0	3	116
				T2M	14,739	3	0	3	107	15,878	3	0	3	115	16,079	3	0	3	117
				T3S	14,274	3	0	3	103	15,377	3	0	3	111	15,572	3	0	3	113
				T3M	14,704	2	0	3	107	15,840	3	0	3	115	16,040	3	0	3	116
				T4M	14,384	2	0	3	104	15,496	3	0	3	112	15,692	3	0	3	114
				TFTM	14,695	2	0	3	106	15,830	3	0	3	115	16,030	3	0	3	116
				T5VS	15,283	4	0	1	111	16,464	4	0	1	119	16,672	4	0	1	121
				T5S	15,295	3	0	1	111	16,477	4	0	1	119	16,686	4	0	1	121
				T5M	15,257	4	0	2	111	16,435	4	0	2	119	16,644	4	0	2	121
				T5W	15,157	4	0	3	110	16,328	4	0	3	118	16,534	4	0	3	120
				BLC	12,048	1	0	2	87	12,979	1	0	2	94	13,143	1	0	2	95
				LCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71
				RCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71

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Performance Data

Lumen Output

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Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
40	1250	**P6**	163W	T1S	17,654	3	0	3	108	19,018	3	0	3	117	19,259	3	0	3	118
				T2S	17,635	3	0	3	108	18,998	3	0	3	117	19,238	3	0	3	118
				T2M	17,726	3	0	3	109	19,096	3	0	3	117	19,337	3	0	3	119
				T3S	17,167	3	0	3	105	18,493	3	0	3	113	18,727	3	0	3	115
				T3M	17,683	3	0	3	108	19,049	3	0	3	117	19,290	3	0	3	118
				T4M	17,299	3	0	3	106	18,635	3	0	4	114	18,871	3	0	4	116
				TFTM	17,672	3	0	3	108	19,038	3	0	4	117	19,279	3	0	4	118
				T5VS	18,379	4	0	1	113	19,800	4	0	1	121	20,050	4	0	1	123
				T5S	18,394	4	0	2	113	19,816	4	0	2	122	20,066	4	0	2	123
				T5M	18,348	4	0	2	113	19,766	4	0	2	121	20,016	4	0	2	123
				T5W	18,228	5	0	3	112	19,636	5	0	3	120	19,885	5	0	3	122
				BLC	14,489	2	0	2	89	15,609	2	0	3	96	15,806	2	0	3	97
				LCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
				RCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
40	1400	**P7**	183W	T1S	19,227	3	0	3	105	20,712	3	0	3	113	20,975	3	0	3	115
				T2S	19,206	3	0	3	105	20,690	3	0	3	113	20,952	3	0	3	114
				T2M	19,305	3	0	3	105	20,797	3	0	3	114	21,060	3	0	3	115
				T3S	18,696	3	0	3	102	20,141	3	0	3	110	20,396	3	0	4	111
				T3M	19,258	3	0	3	105	20,746	3	0	3	113	21,009	3	0	3	115
				T4M	18,840	3	0	4	103	20,296	3	0	4	111	20,553	3	0	4	112
				TFTM	19,246	3	0	4	105	20,734	3	0	4	113	20,996	3	0	4	115
				T5VS	20,017	4	0	1	109	21,564	4	0	1	118	21,837	4	0	1	119
				T5S	20,033	4	0	2	109	21,581	4	0	2	118	21,854	4	0	2	119
				T5M	19,983	4	0	2	109	21,527	5	0	3	118	21,799	5	0	3	119
				T5W	19,852	5	0	3	108	21,386	5	0	3	117	21,656	5	0	3	118
				BLC	15,780	2	0	3	86	16,999	2	0	3	93	17,214	2	0	3	94
				LCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
				RCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
60	1050	**P8**	207W	T1S	22,490	3	0	3	109	24,228	3	0	3	117	24,535	3	0	3	119
				T2S	22,466	3	0	4	109	24,202	3	0	4	117	24,509	3	0	4	118
				T2M	22,582	3	0	3	109	24,327	3	0	3	118	24,635	3	0	3	119
				T3S	21,870	3	0	4	106	23,560	3	0	4	114	23,858	3	0	4	115
				T3M	22,527	3	0	4	109	24,268	3	0	4	117	24,575	3	0	4	119
				T4M	22,038	3	0	4	106	23,741	3	0	4	115	24,041	3	0	4	116
				TFTM	22,513	3	0	4	109	24,253	3	0	4	117	24,560	3	0	4	119
				T5VS	23,415	5	0	1	113	25,224	5	0	1	122	25,543	5	0	1	123
				T5S	23,434	4	0	2	113	25,244	4	0	2	122	25,564	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,221	5	0	4	112	25,016	5	0	4	121	25,332	5	0	4	122
				BLC	18,458	2	0	3	89	19,885	2	0	3	96	20,136	2	0	3	97
				LCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
60	1250	**P9**	241W	T1S	25,575	3	0	3	106	27,551	3	0	3	114	27,900	3	0	3	116
				T2S	25,548	3	0	4	106	27,522	3	0	4	114	27,871	3	0	4	116
				T2M	25,680	3	0	3	107	27,664	3	0	3	115	28,014	3	0	3	116
				T3S	24,870	3	0	4	103	26,791	3	0	4	111	27,130	3	0	4	113
				T3M	25,617	3	0	4	106	27,597	3	0	4	115	27,946	3	0	4	116
				T4M	25,061	3	0	4	104	26,997	3	0	4	112	27,339	3	0	4	113
				TFTM	25,602	3	0	4	106	27,580	3	0	4	114	27,929	3	0	4	116
				T5VS	26,626	5	0	1	110	28,684	5	0	1	119	29,047	5	0	1	121
				T5S	26,648	4	0	2	111	28,707	5	0	2	119	29,070	5	0	2	121
				T5M	26,581	5	0	3	110	28,635	5	0	3	119	28,997	5	0	3	120
				T5W	26,406	5	0	4	110	28,447	5	0	4	118	28,807	5	0	4	120
				BLC	20,990	2	0	3	87	22,612	2	0	3	94	22,898	2	0	3	95
				LCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71
				RCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
60	530	**P10**	106W	T1S	13,042	3	0	3	123	14,050	3	0	3	133	14,228	3	0	3	134
				T2S	12,967	4	0	4	122	13,969	4	0	4	132	14,146	4	0	4	133
				T2M	13,201	3	0	3	125	14,221	3	0	3	134	14,401	3	0	3	136
				T3S	12,766	4	0	4	120	13,752	4	0	4	130	13,926	4	0	4	131
				T3M	13,193	4	0	4	124	14,213	4	0	4	134	14,393	4	0	4	136
				T4M	12,944	4	0	4	122	13,945	4	0	4	132	14,121	4	0	4	133
				TFTM	13,279	4	0	4	125	14,305	4	0	4	135	14,486	4	0	4	137
				T5VS	13,372	3	0	1	126	14,405	4	0	1	136	14,588	4	0	1	138
				T5S	13,260	3	0	1	125	14,284	3	0	1	135	14,465	3	0	1	136
				T5M	13,256	4	0	2	125	14,281	4	0	2	135	14,462	4	0	2	136
				T5W	13,137	4	0	3	124	14,153	4	0	3	134	14,332	4	0	3	135
				BLC	10,906	3	0	3	103	11,749	3	0	3	111	11,898	3	0	3	112
				LCCO	7,789	1	0	3	73	8,391	1	0	3	79	8,497	1	0	3	80
				RCCO	7,779	4	0	4	73	8,380	4	0	4	79	8,486	4	0	4	80
60	700	**P11**	137W	T1S	16,556	3	0	3	121	17,835	3	0	3	130	18,061	4	0	4	132
				T2S	16,461	4	0	4	120	17,733	4	0	4	129	17,957	4	0	4	131
				T2M	16,758	4	0	4	122	18,053	4	0	4	132	18,281	4	0	4	133
				T3S	16,205	4	0	4	118	17,457	4	0	4	127	17,678	4	0	4	129
				T3M	16,748	4	0	4	122	18,042	4	0	4	132	18,271	4	0	4	133
				T4M	16,432	4	0	4	120	17,702	4	0	4	129	17,926	4	0	4	131
				TFTM	16,857	4	0	4	123	18,159	4	0	4	133	18,389	4	0	4	134
				T5VS	16,975	4	0	1	124	18,287	4	0	1	133	18,518	4	0	1	135
				T5S	16,832	4	0	1	123	18,133	4	0	2	132	18,362	4	0	2	134
				T5M	16,828	4	0	2	123	18,128	4	0	2	132	18,358	4	0	2	134
				T5W	16,677	4	0	3	122	17,966	5	0	3	131	18,193	5	0	3	133
				BLC	13,845	3	0	3	101	14,915	3	0	3	109	15,103	3	0	3	110
				LCCO	9,888	1	0	3	72	10,652	2	0	3	78	10,787	2	0	3	79
				RCCO	9,875	4	0	4	72	10,638	4	0	4	78	10,773	4	0	4	79
60	1050	**P12**	207W	T1S	22,996	4	0	4	111	24,773	4	0	4	120	25,087	4	0	4	121
				T2S	22,864	4	0	4	110	24,631	5	0	5	119	24,943	5	0	5	120
				T2M	23,277	4	0	4	112	25,075	4	0	4	121	25,393	4	0	4	123
				T3S	22,509	4	0	4	109	24,248	5	0	5	117	24,555	5	0	5	119
				T3M	23,263	4	0	4	112	25,061	4	0	4	121	25,378	4	0	4	123
				T4M	22,824	5	0	5	110	24,588	5	0	5	119	24,899	5	0	5	120
				TFTM	23,414	5	0	5	113	25,223	5	0	5	122	25,543	5	0	5	123
				T5VS	23,579	5	0	1	114	25,401	5	0	1	123	25,722	5	0	1	124
				T5S	23,380	4	0	2	113	25,187	4	0	2	122	25,506	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,165	5	0	4	112	24,955	5	0	4	121	25,271	5	0	4	122
				BLC	19,231	4	0	4	93	20,717	4	0	4	100	20,979	4	0	4	101
				LCCO	13,734	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,716	4	0	4	66	14,776	4	0	4	71	14,963	4	0	4	72
60	1250	**P13**	231W	T1S	25,400	4	0	4	110	27,363	4	0	4	118	27,709	4	0	4	120
				T2S	25,254	5	0	5	109	27,205	5	0	5	118	27,550	5	0	5	119
				T2M	25,710	4	0	4	111	27,696	4	0	4	120	28,047	4	0	4	121
				T3S	24,862	5	0	5	108	26,783	5	0	5	116	27,122	5	0	5	117
				T3M	25,695	5	0	5	111	27,680	5	0	5	120	28,031	5	0	5	121
				T4M	25,210	5	0	5	109	27,158	5	0	5	118	27,502	5	0	5	119
				TFTM	25,861	5	0	5	112	27,860	5	0	5	121	28,212	5	0	5	122
				T5VS	26,043	5	0	1	113	28,056	5	0	1	121	28,411	5	0	1	123
				T5S	25,824	4	0	2	112	27,819	5	0	2	120	28,172	5	0	2	122
				T5M	25,818	5	0	3	112	27,813	5	0	3	120	28,165	5	0	3	122
				T5W	25,586	5	0	4	111	27,563	5	0	4	119	27,912	5	0	4	121
				BLC	21,241	4	0	4	92	22,882	4	0	4	99	23,172	4	0	4	100
				LCCO	15,170	2	0	4	66	16,342	2	0	4	71	16,549	2	0	4	72
				RCCO	15,150	5	0	5	66	16,321	5	0	5	71	16,527	5	0	5	72

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FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS
The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensors with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 30 feet.

nLIGHT AIR CONTROLS
The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basi motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling patter (template #8). NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40ºC minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

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D-Series Size 1
LED Area Luminaire

Catalog Number: DSX1 LED-P9-50K-T3M-MVOLT-WBA-DDBXD

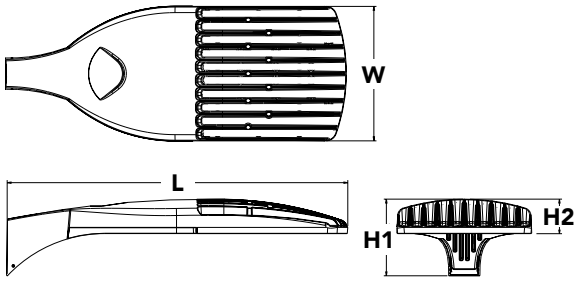
Notes: S2 Fixture

Type:

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED	P9	50K	T3M	MVOLT	WBA
Series	**LEDs**	**Color temperature**	**Distribution**	**Voltage**	**Mounting**

Series
- DSX1 LED

LEDs
- **Forward optics**
- P1, P2, P3, P4[1], P5[1], P6[1], P7[1], P8, P9[1]
- **Rotated optics**
- P10[2], P11[2], P12[2], P13[1,2]

Color temperature
- 30K 3000 K
- 40K 4000 K
- 50K 5000 K

Distribution
- T1S Type I short (Automotive)
- T2S Type II short
- T2M Type II medium
- T3S Type III short
- T3M Type III medium
- T4M Type IV medium
- TFTM Forward throw medium
- T5VS Type V very short[3]
- T5S Type V short[3]
- T5M Type V medium[3]
- T5W Type V wide[3]
- BLC Backlight control[4]
- LCCO Left corner cutoff[4]
- RCCO Right corner cutoff[4]

Voltage
- MVOLT[5]
- 120[6]
- 208[6]
- 240[6]
- 277[6]
- 347[6]
- 480[6]

Mounting
- **Shipped included**
- SPA Square pole mounting
- RPA Round pole mounting[7]
- WBA Wall bracket[3]
- SPUMBA Square pole universal mounting adaptor[8]
- RPUMBA Round pole universal mounting adaptor[8]
- **Shipped separately**
- KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[9]

DDBXD

Control options

Shipped installed
- NLTAIR2 nLight AIR generation 2 enabled[10]
- PIRHN Network, high/low motion/ambient sensor[11]
- PER NEMA twist-lock receptacle only (controls ordered separate)[12]
- PER5 Five-pin receptacle only (controls ordered separate)[12,13]
- PER7 Seven-pin receptacle only (controls ordered separate)[12,13]
- DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[14]
- DS Dual switching[15,16,17]
- PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[17,18]
- PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[17,18]
- PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[17,18]
- PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[17,18]
- FAO Field adjustable output[17,19]

Other options

Shipped installed
- HS House-side shield[20]
- SF Single fuse (120, 277, 347V)[6]
- DF Double fuse (208, 240, 480V)[6]
- L90 Left rotated optics[2]
- R90 Right rotated optics[2]
- HA 50°C ambient operations[1]
- **Shipped separately**
- BS Bird spikes[21]
- EGS External glare shield

Finish *(required)*
- DDBXD Dark bronze
- DBLXD Black
- DNAXD Natural aluminum
- DWHXD White
- DDBTXD Textured dark bronze
- DBLBXD Textured black
- DNATXD Textured natural aluminum
- DWHGXD Textured white

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Ordering Information

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [22]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [22]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [22]
DSHORT SBK U	Shorting cap [22]
DSX1HS 30C U	House-side shield for P1, P2, P3, P4 and P5 [20]
DSX1HS 40C U	House-side shield for P6 and P7 [20]
DSX1HS 60C U	House-side shield for P8, P9, P10, P11 and P12 [20]
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish) [23]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [9]
DSX1EGS (FINISH) U	External glare shield

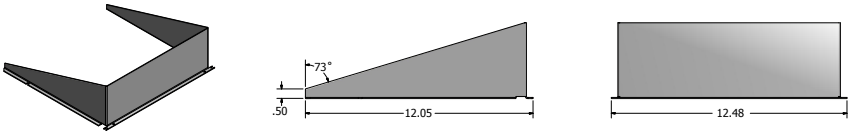
For more control options, visit DTL and ROAM online.

NOTES

1 HA not available with P4, P5, P6, P7, P9 and P13.
2 P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
3 Any Type 5 distribution with photocell, is not available with WBA.
4 Not available with HS.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
6 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
7 Suitable for mounting to round poles between 3.5" and 12" diameter.
8 Universal mounting brackets intended for retrofit on existing, pre-drilled poles only. 1.5 G vibration load rating per ANCI C136.31. Only usable when pole's drill pattern is NOT Lithonia templa #8
9 Must order fixture with SPA option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" diameter mast arm (not included).
10 Must be ordered with PIRHN. Sensor cover available only in dark bronze, black, white and natural aluminum colors.
11 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this link.
12 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting cap included.
13 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Node with integral dimming.
14 DMG not available with PIRHN, PER5, PER7, PIR, PIRH, PIR1FC3V or PIRH1FC3V, FAO.
15 Provides 50/50fixture operation via (2) independent drivers. Not available with PER, PER5, PER7, PIR or PIRH. Not available P1, P2, P3, P4 or P5.
16 Requires (2) separately switched circuits with isolated neutrol.
17 Reference Controls Option Default settings table on page 4.
18 Reference Motion Sensor table on page 4 to see functionality.
19 Not available with other dimming controls options
20 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
21 Must be ordered with fixture for factory pre-drilling.
22 Requires luminaire to be specified with PER, PER5 or PER7 option. See Control Option Table on page 4.
23 For retrofit use only. Only usable when pole's drill pattern is NOT Lithonia template #8

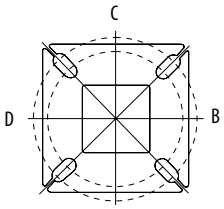
Options

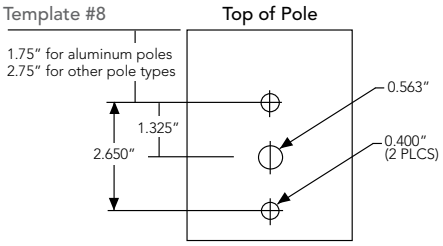
EGS - External Glare Shield



Drilling

HANDHOLE ORIENTATION





Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS

DSX1 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 LED	1.013	2.025	1.945	3.038	2.850	3.749

	Drilling Template	Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"	3.5"	4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

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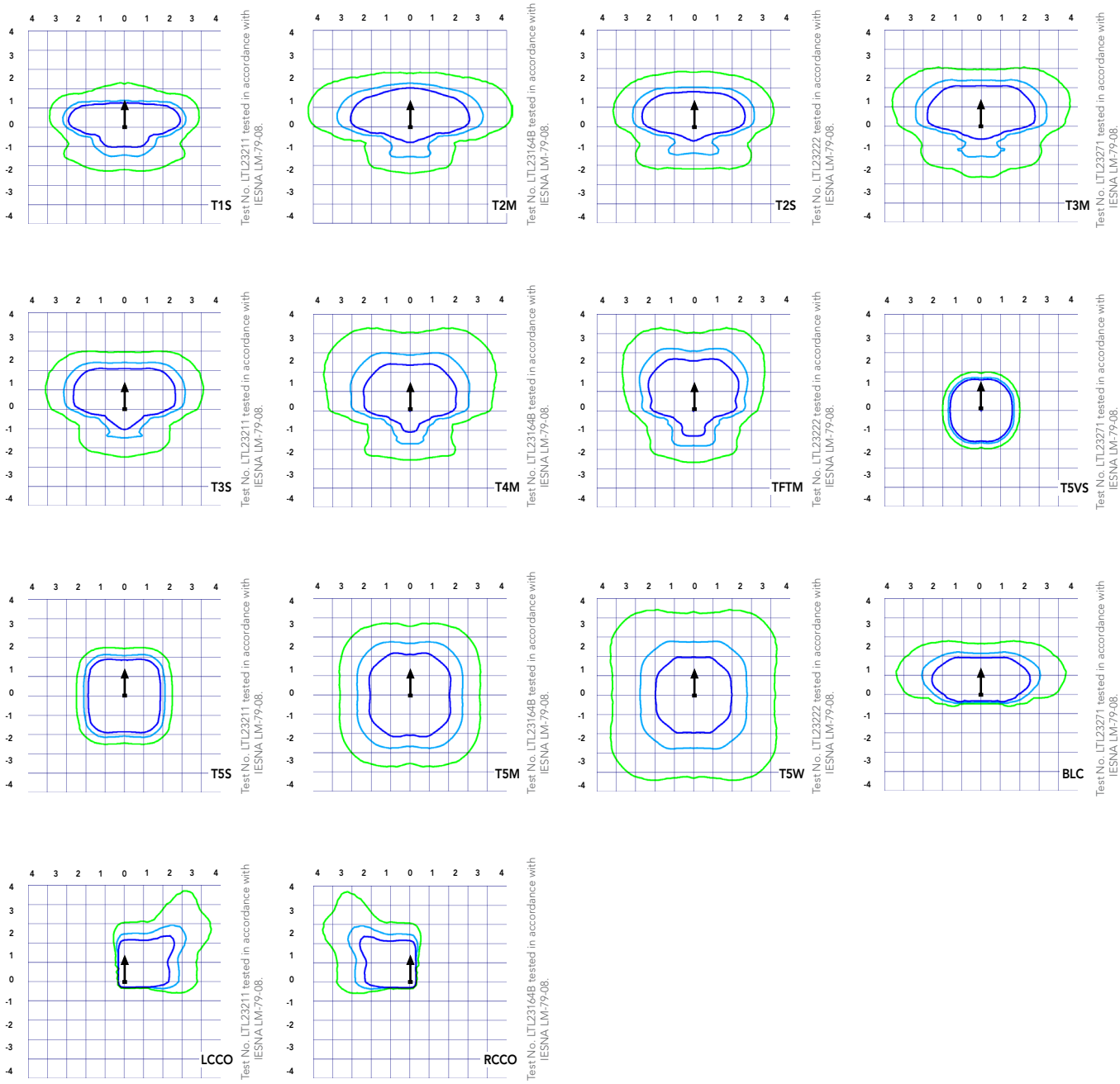
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 1 homepage.

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').

LEGEND
- 0.1 fc
- 0.5 fc
- 1.0 fc



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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.96
50,000	0.92
100,000	0.85

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Phototcell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use when motion sensor is used as dusk to dawn control.						

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	530	54	0.45	0.26	0.23	0.19	0.10	0.12
	P2	30	700	70	0.59	0.34	0.30	0.25	0.20	0.16
	P3	30	1050	102	0.86	0.50	0.44	0.38	0.30	0.22
	P4	30	1250	125	1.06	0.60	0.52	0.46	0.37	0.27
	P5	30	1400	138	1.16	0.67	0.58	0.51	0.40	0.29
	P6	40	1250	163	1.36	0.78	0.68	0.59	0.47	0.34
	P7	40	1400	183	1.53	0.88	0.76	0.66	0.53	0.38
	P8	60	1050	207	1.74	0.98	0.87	0.76	0.64	0.49
	P9	60	1250	241	2.01	1.16	1.01	0.89	0.70	0.51
Rotated Optics (Requires L90 or R90)	P10	60	530	106	0.90	0.52	0.47	0.43	0.33	0.27
	P11	60	700	137	1.15	0.67	0.60	0.53	0.42	0.32
	P12	60	1050	207	1.74	0.99	0.87	0.76	0.60	0.46
	P13	60	1250	231	1.93	1.12	0.97	0.86	0.67	0.49

Controls Options				
Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell recepticle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell. PIR for 8-15' mounting; PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBGR	Also available with PIRH1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSDGR	nLight AIR sensors can be programmed and commissione from the ground using the CIAIRity Pro app.

Attachment: Site Lighting Fixture Submittal_09.25.2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

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Performance Data

Lumen Output

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Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	P1	54W	T1S	6,457	2	0	2	120	6,956	2	0	2	129	7,044	2	0	2	130
				T2S	6,450	2	0	2	119	6,949	2	0	2	129	7,037	2	0	2	130
				T2M	6,483	1	0	1	120	6,984	2	0	2	129	7,073	2	0	2	131
				T3S	6,279	2	0	2	116	6,764	2	0	2	125	6,850	2	0	2	127
				T3M	6,468	1	0	2	120	6,967	1	0	2	129	7,056	1	0	2	131
				T4M	6,327	1	0	2	117	6,816	1	0	2	126	6,902	1	0	2	128
				TFTM	6,464	1	0	2	120	6,963	1	0	2	129	7,051	1	0	2	131
				T5VS	6,722	2	0	0	124	7,242	3	0	0	134	7,334	3	0	0	136
				T5S	6,728	2	0	1	125	7,248	2	0	1	134	7,340	2	0	1	136
				T5M	6,711	3	0	1	124	7,229	3	0	1	134	7,321	3	0	2	136
				T5W	6,667	3	0	2	123	7,182	3	0	2	133	7,273	3	0	2	135
				BLC	5,299	1	0	1	98	5,709	1	0	2	106	5,781	1	0	2	107
				LCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
				RCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
30	700	P2	70W	T1S	8,249	2	0	2	118	8,886	2	0	2	127	8,999	2	0	2	129
				T2S	8,240	2	0	2	118	8,877	2	0	2	127	8,989	2	0	2	128
				T2M	8,283	2	0	2	118	8,923	2	0	2	127	9,036	2	0	2	129
				T3S	8,021	2	0	2	115	8,641	2	0	2	123	8,751	2	0	2	125
				T3M	8,263	2	0	2	118	8,901	2	0	2	127	9,014	2	0	2	129
				T4M	8,083	2	0	2	115	8,708	2	0	2	124	8,818	2	0	2	126
				TFTM	8,257	2	0	2	118	8,896	2	0	2	127	9,008	2	0	2	129
				T5VS	8,588	3	0	0	123	9,252	3	0	0	132	9,369	3	0	0	134
				T5S	8,595	3	0	1	123	9,259	3	0	1	132	9,376	3	0	1	134
				T5M	8,573	3	0	2	122	9,236	3	0	2	132	9,353	3	0	2	134
				T5W	8,517	3	0	2	122	9,175	4	0	2	131	9,291	4	0	2	133
				BLC	6,770	1	0	2	97	7,293	1	0	2	104	7,386	1	0	2	106
				LCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
				RCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
30	1050	P3	102W	T1S	11,661	2	0	2	114	12,562	3	0	3	123	12,721	3	0	3	125
				T2S	11,648	2	0	2	114	12,548	3	0	3	123	12,707	3	0	3	125
				T2M	11,708	2	0	2	115	12,613	2	0	2	124	12,773	2	0	2	125
				T3S	11,339	2	0	2	111	12,215	3	0	3	120	12,370	3	0	3	121
				T3M	11,680	2	0	2	115	12,582	2	0	2	123	12,742	2	0	2	125
				T4M	11,426	2	0	3	112	12,309	2	0	3	121	12,465	2	0	3	122
				TFTM	11,673	2	0	2	114	12,575	2	0	3	123	12,734	2	0	3	125
				T5VS	12,140	3	0	1	119	13,078	3	0	1	128	13,244	3	0	1	130
				T5S	12,150	3	0	1	119	13,089	3	0	1	128	13,254	3	0	1	130
				T5M	12,119	4	0	2	119	13,056	4	0	2	128	13,221	4	0	2	130
				T5W	12,040	4	0	3	118	12,970	4	0	3	127	13,134	4	0	3	129
				BLC	9,570	1	0	2	94	10,310	1	0	2	101	10,440	1	0	2	102
				LCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
				RCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
30	1250	P4	125W	T1S	13,435	3	0	3	107	14,473	3	0	3	116	14,657	3	0	3	117
				T2S	13,421	3	0	3	107	14,458	3	0	3	116	14,641	3	0	3	117
				T2M	13,490	2	0	2	108	14,532	3	0	3	116	14,716	3	0	3	118
				T3S	13,064	3	0	3	105	14,074	3	0	3	113	14,252	3	0	3	114
				T3M	13,457	2	0	2	108	14,497	2	0	2	116	14,681	2	0	2	117
				T4M	13,165	2	0	3	105	14,182	2	0	3	113	14,362	2	0	3	115
				TFTM	13,449	2	0	3	108	14,488	2	0	3	116	14,672	2	0	3	117
				T5VS	13,987	4	0	1	112	15,068	4	0	1	121	15,259	4	0	1	122
				T5S	13,999	3	0	1	112	15,080	3	0	1	121	15,271	3	0	1	122
				T5M	13,963	4	0	2	112	15,042	4	0	2	120	15,233	4	0	2	122
				T5W	13,872	4	0	3	111	14,944	4	0	3	120	15,133	4	0	3	121
				BLC	11,027	1	0	2	88	11,879	1	0	2	95	12,029	1	0	2	96
				LCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
				RCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
30	1400	P5	138W	T1S	14,679	3	0	3	106	15,814	3	0	3	115	16,014	3	0	3	116
				T2S	14,664	3	0	3	106	15,797	3	0	3	114	15,997	3	0	3	116
				T2M	14,739	3	0	3	107	15,878	3	0	3	115	16,079	3	0	3	117
				T3S	14,274	3	0	3	103	15,377	3	0	3	111	15,572	3	0	3	113
				T3M	14,704	2	0	3	107	15,840	3	0	3	115	16,040	3	0	3	116
				T4M	14,384	2	0	3	104	15,496	3	0	3	112	15,692	3	0	3	114
				TFTM	14,695	2	0	3	106	15,830	3	0	3	115	16,030	3	0	3	116
				T5VS	15,283	4	0	1	111	16,464	4	0	1	119	16,672	4	0	1	121
				T5S	15,295	3	0	1	111	16,477	4	0	1	119	16,686	4	0	1	121
				T5M	15,257	4	0	2	111	16,435	4	0	2	119	16,644	4	0	2	121
				T5W	15,157	4	0	3	110	16,328	4	0	3	118	16,534	4	0	3	120
				BLC	12,048	1	0	2	87	12,979	1	0	2	94	13,143	1	0	2	95
				LCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71
				RCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71

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Performance Data

Lumen Output

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Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
40	1250	**P6**	163W	T1S	17,654	3	0	3	108	19,018	3	0	3	117	19,259	3	0	3	118
				T2S	17,635	3	0	3	108	18,998	3	0	3	117	19,238	3	0	3	118
				T2M	17,726	3	0	3	109	19,096	3	0	3	117	19,337	3	0	3	119
				T3S	17,167	3	0	3	105	18,493	3	0	3	113	18,727	3	0	3	115
				T3M	17,683	3	0	3	108	19,049	3	0	3	117	19,290	3	0	3	118
				T4M	17,299	3	0	3	106	18,635	3	0	4	114	18,871	3	0	4	116
				TFTM	17,672	3	0	3	108	19,038	3	0	4	117	19,279	3	0	4	118
				T5VS	18,379	4	0	1	113	19,800	4	0	1	121	20,050	4	0	1	123
				T5S	18,394	4	0	2	113	19,816	4	0	2	122	20,066	4	0	2	123
				T5M	18,348	4	0	2	113	19,766	4	0	2	121	20,016	4	0	2	123
				T5W	18,228	5	0	3	112	19,636	5	0	3	120	19,885	5	0	3	122
				BLC	14,489	2	0	2	89	15,609	2	0	3	96	15,806	2	0	3	97
				LCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
				RCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
40	1400	**P7**	183W	T1S	19,227	3	0	3	105	20,712	3	0	3	113	20,975	3	0	3	115
				T2S	19,206	3	0	3	105	20,690	3	0	3	113	20,952	3	0	3	114
				T2M	19,305	3	0	3	105	20,797	3	0	3	114	21,060	3	0	3	115
				T3S	18,696	3	0	3	102	20,141	3	0	3	110	20,396	3	0	4	111
				T3M	19,258	3	0	3	105	20,746	3	0	3	113	21,009	3	0	3	115
				T4M	18,840	3	0	4	103	20,296	3	0	4	111	20,553	3	0	4	112
				TFTM	19,246	3	0	4	105	20,734	3	0	4	113	20,996	3	0	4	115
				T5VS	20,017	4	0	1	109	21,564	4	0	1	118	21,837	4	0	1	119
				T5S	20,033	4	0	2	109	21,581	4	0	2	118	21,854	4	0	2	119
				T5M	19,983	4	0	2	109	21,527	5	0	3	118	21,799	5	0	3	119
				T5W	19,852	5	0	3	108	21,386	5	0	3	117	21,656	5	0	3	118
				BLC	15,780	2	0	3	86	16,999	2	0	3	93	17,214	2	0	3	94
				LCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
				RCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
60	1050	**P8**	207W	T1S	22,490	3	0	3	109	24,228	3	0	3	117	24,535	3	0	3	119
				T2S	22,466	3	0	4	109	24,202	3	0	4	117	24,509	3	0	4	118
				T2M	22,582	3	0	3	109	24,327	3	0	3	118	24,635	3	0	3	119
				T3S	21,870	3	0	4	106	23,560	3	0	4	114	23,858	3	0	4	115
				T3M	22,527	3	0	4	109	24,268	3	0	4	117	24,575	3	0	4	119
				T4M	22,038	3	0	4	106	23,741	3	0	4	115	24,041	3	0	4	116
				TFTM	22,513	3	0	4	109	24,253	3	0	4	117	24,560	3	0	4	119
				T5VS	23,415	5	0	1	113	25,224	5	0	1	122	25,543	5	0	1	123
				T5S	23,434	4	0	2	113	25,244	4	0	2	122	25,564	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,221	5	0	4	112	25,016	5	0	4	121	25,332	5	0	4	122
				BLC	18,458	2	0	3	89	19,885	2	0	3	96	20,136	2	0	3	97
				LCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
60	1250	**P9**	241W	T1S	25,575	3	0	3	106	27,551	3	0	3	114	27,900	3	0	3	116
				T2S	25,548	3	0	4	106	27,522	3	0	4	114	27,871	3	0	4	116
				T2M	25,680	3	0	3	107	27,664	3	0	3	115	28,014	3	0	3	116
				T3S	24,870	3	0	4	103	26,791	3	0	4	111	27,130	3	0	4	113
				T3M	25,617	3	0	4	106	27,597	3	0	4	115	27,946	3	0	4	116
				T4M	25,061	3	0	4	104	26,997	3	0	4	112	27,339	3	0	4	113
				TFTM	25,602	3	0	4	106	27,580	3	0	4	114	27,929	3	0	4	116
				T5VS	26,626	5	0	1	110	28,684	5	0	1	119	29,047	5	0	1	121
				T5S	26,648	4	0	2	111	28,707	5	0	2	119	29,070	5	0	2	121
				T5M	26,581	5	0	3	110	28,635	5	0	3	119	28,997	5	0	3	120
				T5W	26,406	5	0	4	110	28,447	5	0	4	118	28,807	5	0	4	120
				BLC	20,990	2	0	3	87	22,612	2	0	3	94	22,898	2	0	3	95
				LCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71
				RCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71

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Performance Data

Lumen Output

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Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
60	530	**P10**	106W	T1S	13,042	3	0	3	123	14,050	3	0	3	133	14,228	3	0	3	134
				T2S	12,967	4	0	4	122	13,969	4	0	4	132	14,146	4	0	4	133
				T2M	13,201	3	0	3	125	14,221	3	0	3	134	14,401	3	0	3	136
				T3S	12,766	4	0	4	120	13,752	4	0	4	130	13,926	4	0	4	131
				T3M	13,193	4	0	4	124	14,213	4	0	4	134	14,393	4	0	4	136
				T4M	12,944	4	0	4	122	13,945	4	0	4	132	14,121	4	0	4	133
				TFTM	13,279	4	0	4	125	14,305	4	0	4	135	14,486	4	0	4	137
				T5VS	13,372	3	0	1	126	14,405	4	0	1	136	14,588	4	0	1	138
				T5S	13,260	3	0	1	125	14,284	3	0	1	135	14,465	3	0	1	136
				T5M	13,256	4	0	2	125	14,281	4	0	2	135	14,462	4	0	2	136
				T5W	13,137	4	0	3	124	14,153	4	0	3	134	14,332	4	0	3	135
				BLC	10,906	3	0	3	103	11,749	3	0	3	111	11,898	3	0	3	112
				LCCO	7,789	1	0	3	73	8,391	1	0	3	79	8,497	1	0	3	80
				RCCO	7,779	4	0	4	73	8,380	4	0	4	79	8,486	4	0	4	80
60	700	**P11**	137W	T1S	16,556	3	0	3	121	17,835	3	0	3	130	18,061	4	0	4	132
				T2S	16,461	4	0	4	120	17,733	4	0	4	129	17,957	4	0	4	131
				T2M	16,758	4	0	4	122	18,053	4	0	4	132	18,281	4	0	4	133
				T3S	16,205	4	0	4	118	17,457	4	0	4	127	17,678	4	0	4	129
				T3M	16,748	4	0	4	122	18,042	4	0	4	132	18,271	4	0	4	133
				T4M	16,432	4	0	4	120	17,702	4	0	4	129	17,926	4	0	4	131
				TFTM	16,857	4	0	4	123	18,159	4	0	4	133	18,389	4	0	4	134
				T5VS	16,975	4	0	1	124	18,287	4	0	1	133	18,518	4	0	1	135
				T5S	16,832	4	0	1	123	18,133	4	0	2	132	18,362	4	0	2	134
				T5M	16,828	4	0	2	123	18,128	4	0	2	132	18,358	4	0	2	134
				T5W	16,677	4	0	3	122	17,966	5	0	3	131	18,193	5	0	3	133
				BLC	13,845	3	0	3	101	14,915	3	0	3	109	15,103	3	0	3	110
				LCCO	9,888	1	0	3	72	10,652	2	0	3	78	10,787	2	0	3	79
				RCCO	9,875	4	0	4	72	10,638	4	0	4	78	10,773	4	0	4	79
60	1050	**P12**	207W	T1S	22,996	4	0	4	111	24,773	4	0	4	120	25,087	4	0	4	121
				T2S	22,864	4	0	4	110	24,631	5	0	5	119	24,943	5	0	5	120
				T2M	23,277	4	0	4	112	25,075	4	0	4	121	25,393	4	0	4	123
				T3S	22,509	4	0	4	109	24,248	5	0	5	117	24,555	5	0	5	119
				T3M	23,263	4	0	4	112	25,061	4	0	4	121	25,378	4	0	4	123
				T4M	22,824	5	0	5	110	24,588	5	0	5	119	24,899	5	0	5	120
				TFTM	23,414	5	0	5	113	25,223	5	0	5	122	25,543	5	0	5	123
				T5VS	23,579	5	0	1	114	25,401	5	0	1	123	25,722	5	0	1	124
				T5S	23,380	4	0	2	113	25,187	4	0	2	122	25,506	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,165	5	0	4	112	24,955	5	0	4	121	25,271	5	0	4	122
				BLC	19,231	4	0	4	93	20,717	4	0	4	100	20,979	4	0	4	101
				LCCO	13,734	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,716	4	0	4	66	14,776	4	0	4	71	14,963	4	0	4	72
60	1250	**P13**	231W	T1S	25,400	4	0	4	110	27,363	4	0	4	118	27,709	4	0	4	120
				T2S	25,254	5	0	5	109	27,205	5	0	5	118	27,550	5	0	5	119
				T2M	25,710	4	0	4	111	27,696	4	0	4	120	28,047	4	0	4	121
				T3S	24,862	5	0	5	108	26,783	5	0	5	116	27,122	5	0	5	117
				T3M	25,695	5	0	5	111	27,680	5	0	5	120	28,031	5	0	5	121
				T4M	25,210	5	0	5	109	27,158	5	0	5	118	27,502	5	0	5	119
				TFTM	25,861	5	0	5	112	27,860	5	0	5	121	28,212	5	0	5	122
				T5VS	26,043	5	0	1	113	28,056	5	0	1	121	28,411	5	0	1	123
				T5S	25,824	4	0	2	112	27,819	5	0	2	120	28,172	5	0	2	122
				T5M	25,818	5	0	3	112	27,813	5	0	3	120	28,165	5	0	3	122
				T5W	25,586	5	0	4	111	27,563	5	0	4	119	27,912	5	0	4	121
				BLC	21,241	4	0	4	92	22,882	4	0	4	99	23,172	4	0	4	100
				LCCO	15,170	2	0	4	66	16,342	2	0	4	71	16,549	2	0	4	72
				RCCO	15,150	5	0	5	66	16,321	5	0	5	71	16,527	5	0	5	72

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FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS
The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensors with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 30 feet.

nLIGHT AIR CONTROLS
The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basi motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling patter (template #8). NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40ºC minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

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D-Series Size 1
LED Area Luminaire

Catalog Number: DSX1 LED-P9-50K-T4M-MVOLT-WBA-DDBXD

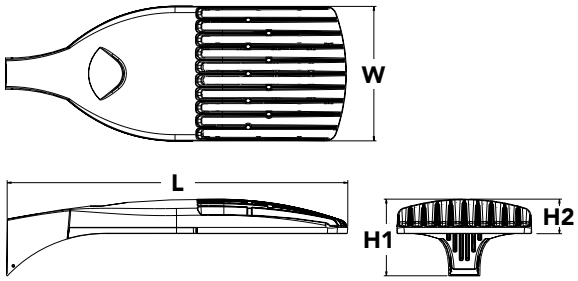
Notes: S3 Fixture

Type:

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED	P9	50K	T4M	MVOLT	WBA
Series	**LEDs**	**Color temperature**	**Distribution**	**Voltage**	**Mounting**

Series
- DSX1 LED

LEDs
- **Forward optics**
- P1, P2, P3, P4[1], P5[1], P6[1], P7[1], P8, P9[1]
- **Rotated optics**
- P10[2], P11[2], P12[2], P13[1,2]

Color temperature
- 30K 3000 K
- 40K 4000 K
- 50K 5000 K

Distribution
- T1S Type I short (Automotive)
- T2S Type II short
- T2M Type II medium
- T3S Type III short
- T3M Type III medium
- T4M Type IV medium
- TFTM Forward throw medium
- T5VS Type V very short[3]
- T5S Type V short[3]
- T5M Type V medium[3]
- T5W Type V wide[3]
- BLC Backlight control[4]
- LCCO Left corner cutoff[4]
- RCCO Right corner cutoff[4]

Voltage
- MVOLT[5]
- 120[6]
- 208[6]
- 240[6]
- 277[6]
- 347[6]
- 480[6]

Mounting
- **Shipped included**
- SPA Square pole mounting
- RPA Round pole mounting[7]
- WBA Wall bracket[3]
- SPUMBA Square pole universal mounting adaptor[8]
- RPUMBA Round pole universal mounting adaptor[8]
- **Shipped separately**
- KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[9]

DDBXD

Control options

Shipped installed
- NLTAIR2 nLight AIR generation 2 enabled[10]
- PIRHN Network, high/low motion/ambient sensor[11]
- PER NEMA twist-lock receptacle only (controls ordered separate)[12]
- PER5 Five-pin receptacle only (controls ordered separate)[12,13]
- PER7 Seven-pin receptacle only (controls ordered separate)[12,13]
- DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[14]
- DS Dual switching[15,16,17]
- PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[17,18]
- PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[17,18]
- PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[17,18]
- PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[17,18]
- FAO Field adjustable output[17,19]

Other options

Shipped installed
- HS House-side shield[20]
- SF Single fuse (120, 277, 347V)[6]
- DF Double fuse (208, 240, 480V)[6]
- L90 Left rotated optics[2]
- R90 Right rotated optics[2]
- HA 50°C ambient operations[1]

Shipped separately
- BS Bird spikes[21]
- EGS External glare shield

Finish (required)

- DDBXD Dark bronze
- DBLXD Black
- DNAXD Natural aluminum
- DWHXD White
- DDBTXD Textured dark bronze
- DBLBXD Textured black
- DNATXD Textured natural aluminum
- DWHGXD Textured white

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Ordering Information

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [22]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [22]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [22]
DSHORT SBK U	Shorting cap [22]
DSX1HS 30C U	House-side shield for P1, P2, P3, P4 and P5 [20]
DSX1HS 40C U	House-side shield for P6 and P7 [20]
DSX1HS 60C U	House-side shield for P8, P9, P10, P11 and P12 [20]
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish) [23]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [9]
DSX1EGS (FINISH) U	External glare shield

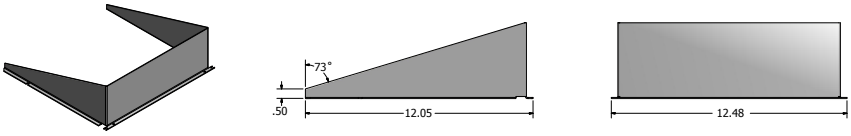
For more control options, visit DTL and ROAM online.

NOTES

1 HA not available with P4, P5, P6, P7, P9 and P13.
2 P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
3 Any Type 5 distribution with photocell, is not available with WBA.
4 Not available with HS.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
6 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
7 Suitable for mounting to round poles between 3.5" and 12" diameter.
8 Universal mounting brackets intended for retrofit on existing, pre-drilled poles only. 1.5 G vibration load rating per ANCI C136.31. Only usable when pole's drill pattern is NOT Lithonia templa #8
9 Must order fixture with SPA option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" diameter mast arm (not included).
10 Must be ordered with PIRHN. Sensor cover available only in dark bronze, black, white and natural aluminum colors.
11 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this link.
12 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting cap included.
13 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Node with integral dimming.
14 DMG not available with PIRHN, PER5, PER7, PIR, PIRH, PIR1FC3V or PIRH1FC3V, FAO.
15 Provides 50/50fixture operation via (2) independent drivers. Not available with PER, PER5, PER7, PIR or PIRH. Not available P1, P2, P3, P4 or P5.
16 Requires (2) separately switched circuits with isolated neutrol.
17 Reference Controls Option Default settings table on page 4.
18 Reference Motion Sensor table on page 4 to see functionality.
19 Not available with other dimming controls options
20 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
21 Must be ordered with fixture for factory pre-drilling.
22 Requires luminaire to be specified with PER, PER5 or PER7 option. See Control Option Table on page 4.
23 For retrofit use only. Only usable when pole's drill pattern is NOT Lithonia template #8

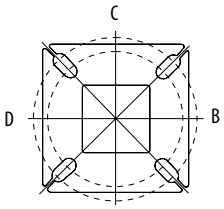
Options

EGS - External Glare Shield

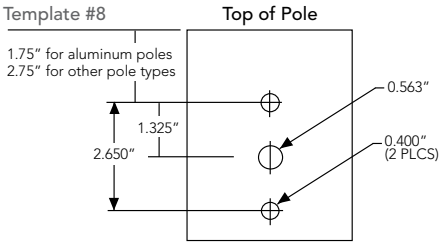


Drilling

HANDHOLE ORIENTATION



Template #8



Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS

DSX1 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 LED	1.013	2.025	1.945	3.038	2.850	3.749

	Drilling Template	Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"	3.5"	4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

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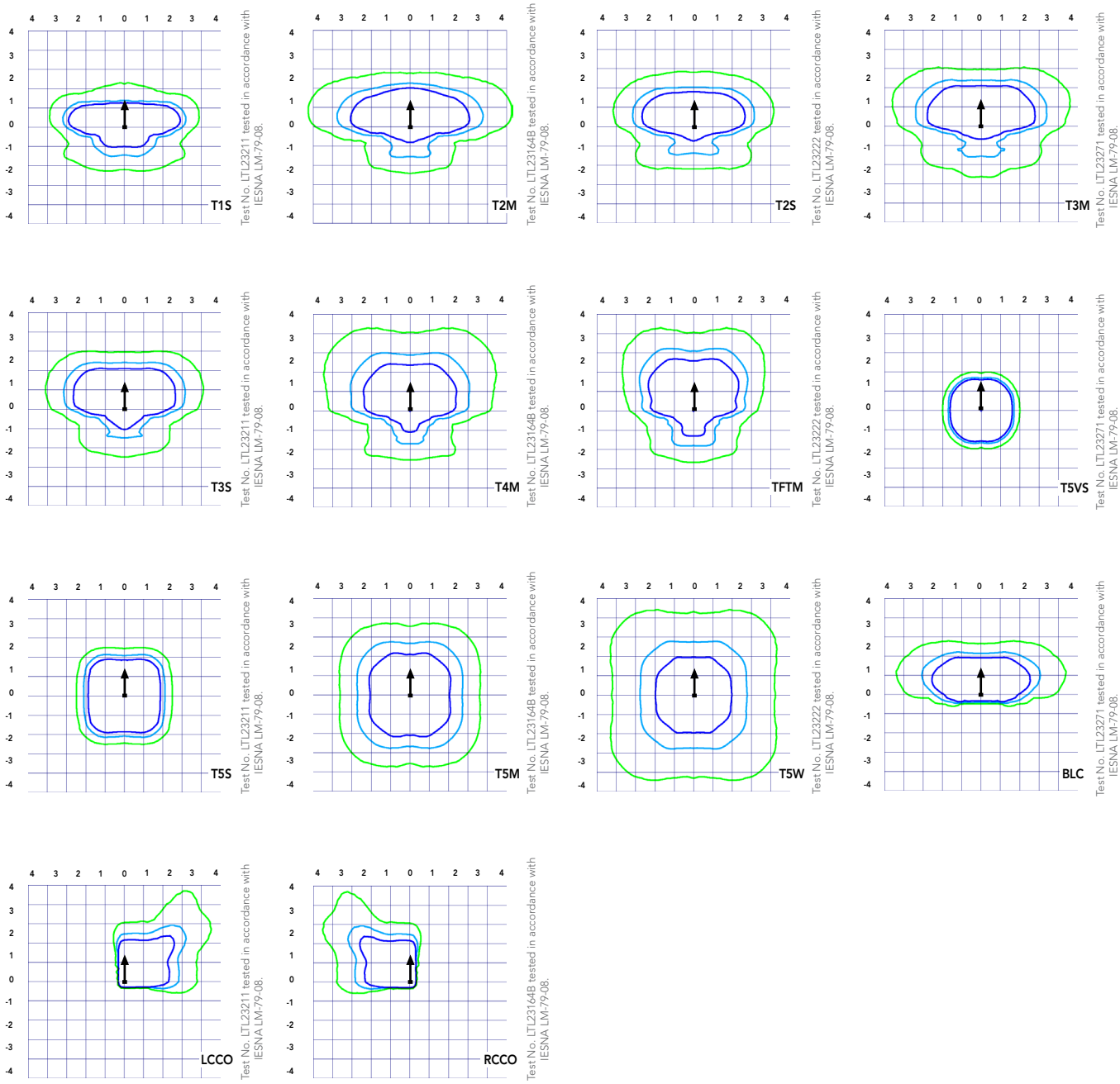
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 1 homepage.

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').

LEGEND
- 0.1 fc
- 0.5 fc
- 1.0 fc



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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.96
50,000	0.92
100,000	0.85

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Phototcell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use when motion sensor is used as dusk to dawn control.						

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	530	54	0.45	0.26	0.23	0.19	0.10	0.12
	P2	30	700	70	0.59	0.34	0.30	0.25	0.20	0.16
	P3	30	1050	102	0.86	0.50	0.44	0.38	0.30	0.22
	P4	30	1250	125	1.06	0.60	0.52	0.46	0.37	0.27
	P5	30	1400	138	1.16	0.67	0.58	0.51	0.40	0.29
	P6	40	1250	163	1.36	0.78	0.68	0.59	0.47	0.34
	P7	40	1400	183	1.53	0.88	0.76	0.66	0.53	0.38
	P8	60	1050	207	1.74	0.98	0.87	0.76	0.64	0.49
	P9	60	1250	241	2.01	1.16	1.01	0.89	0.70	0.51
Rotated Optics (Requires L90 or R90)	P10	60	530	106	0.90	0.52	0.47	0.43	0.33	0.27
	P11	60	700	137	1.15	0.67	0.60	0.53	0.42	0.32
	P12	60	1050	207	1.74	0.99	0.87	0.76	0.60	0.46
	P13	60	1250	231	1.93	1.12	0.97	0.86	0.67	0.49

Controls Options				
Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell recepticle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell. PIR for 8-15' mounting; PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBGR	Also available with PIRH1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSDGR	nLight AIR sensors can be programmed and commissione from the ground using the CIAIRity Pro app.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	P1	54W	T1S	6,457	2	0	2	120	6,956	2	0	2	129	7,044	2	0	2	130
				T2S	6,450	2	0	2	119	6,949	2	0	2	129	7,037	2	0	2	130
				T2M	6,483	1	0	1	120	6,984	2	0	2	129	7,073	2	0	2	131
				T3S	6,279	2	0	2	116	6,764	2	0	2	125	6,850	2	0	2	127
				T3M	6,468	1	0	2	120	6,967	1	0	2	129	7,056	1	0	2	131
				T4M	6,327	1	0	2	117	6,816	1	0	2	126	6,902	1	0	2	128
				TFTM	6,464	1	0	2	120	6,963	1	0	2	129	7,051	1	0	2	131
				T5VS	6,722	2	0	0	124	7,242	3	0	0	134	7,334	3	0	0	136
				T5S	6,728	2	0	1	125	7,248	2	0	1	134	7,340	2	0	1	136
				T5M	6,711	3	0	1	124	7,229	3	0	1	134	7,321	3	0	2	136
				T5W	6,667	3	0	2	123	7,182	3	0	2	133	7,273	3	0	2	135
				BLC	5,299	1	0	1	98	5,709	1	0	2	106	5,781	1	0	2	107
				LCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
				RCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
30	700	P2	70W	T1S	8,249	2	0	2	118	8,886	2	0	2	127	8,999	2	0	2	129
				T2S	8,240	2	0	2	118	8,877	2	0	2	127	8,989	2	0	2	128
				T2M	8,283	2	0	2	118	8,923	2	0	2	127	9,036	2	0	2	129
				T3S	8,021	2	0	2	115	8,641	2	0	2	123	8,751	2	0	2	125
				T3M	8,263	2	0	2	118	8,901	2	0	2	127	9,014	2	0	2	129
				T4M	8,083	2	0	2	115	8,708	2	0	2	124	8,818	2	0	2	126
				TFTM	8,257	2	0	2	118	8,896	2	0	2	127	9,008	2	0	2	129
				T5VS	8,588	3	0	0	123	9,252	3	0	0	132	9,369	3	0	0	134
				T5S	8,595	3	0	1	123	9,259	3	0	1	132	9,376	3	0	1	134
				T5M	8,573	3	0	2	122	9,236	3	0	2	132	9,353	3	0	2	134
				T5W	8,517	3	0	2	122	9,175	4	0	2	131	9,291	4	0	2	133
				BLC	6,770	1	0	2	97	7,293	1	0	2	104	7,386	1	0	2	106
				LCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
				RCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
30	1050	P3	102W	T1S	11,661	2	0	2	114	12,562	3	0	3	123	12,721	3	0	3	125
				T2S	11,648	2	0	2	114	12,548	3	0	3	123	12,707	3	0	3	125
				T2M	11,708	2	0	2	115	12,613	2	0	2	124	12,773	2	0	2	125
				T3S	11,339	2	0	2	111	12,215	3	0	3	120	12,370	3	0	3	121
				T3M	11,680	2	0	2	115	12,582	2	0	2	123	12,742	2	0	2	125
				T4M	11,426	2	0	3	112	12,309	2	0	3	121	12,465	2	0	3	122
				TFTM	11,673	2	0	2	114	12,575	2	0	3	123	12,734	2	0	3	125
				T5VS	12,140	3	0	1	119	13,078	3	0	1	128	13,244	3	0	1	130
				T5S	12,150	3	0	1	119	13,089	3	0	1	128	13,254	3	0	1	130
				T5M	12,119	4	0	2	119	13,056	4	0	2	128	13,221	4	0	2	130
				T5W	12,040	4	0	3	118	12,970	4	0	3	127	13,134	4	0	3	129
				BLC	9,570	1	0	2	94	10,310	1	0	2	101	10,440	1	0	2	102
				LCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
				RCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
30	1250	P4	125W	T1S	13,435	3	0	3	107	14,473	3	0	3	116	14,657	3	0	3	117
				T2S	13,421	3	0	3	107	14,458	3	0	3	116	14,641	3	0	3	117
				T2M	13,490	2	0	2	108	14,532	3	0	3	116	14,716	3	0	3	118
				T3S	13,064	3	0	3	105	14,074	3	0	3	113	14,252	3	0	3	114
				T3M	13,457	2	0	2	108	14,497	2	0	2	116	14,681	2	0	2	117
				T4M	13,165	2	0	3	105	14,182	2	0	3	113	14,362	2	0	3	115
				TFTM	13,449	2	0	3	108	14,488	2	0	3	116	14,672	2	0	3	117
				T5VS	13,987	4	0	1	112	15,068	4	0	1	121	15,259	4	0	1	122
				T5S	13,999	3	0	1	112	15,080	3	0	1	121	15,271	3	0	1	122
				T5M	13,963	4	0	2	112	15,042	4	0	2	120	15,233	4	0	2	122
				T5W	13,872	4	0	3	111	14,944	4	0	3	120	15,133	4	0	3	121
				BLC	11,027	1	0	2	88	11,879	1	0	2	95	12,029	1	0	2	96
				LCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
				RCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
30	1400	P5	138W	T1S	14,679	3	0	3	106	15,814	3	0	3	115	16,014	3	0	3	116
				T2S	14,664	3	0	3	106	15,797	3	0	3	114	15,997	3	0	3	116
				T2M	14,739	3	0	3	107	15,878	3	0	3	115	16,079	3	0	3	117
				T3S	14,274	3	0	3	103	15,377	3	0	3	111	15,572	3	0	3	113
				T3M	14,704	2	0	3	107	15,840	3	0	3	115	16,040	3	0	3	116
				T4M	14,384	2	0	3	104	15,496	3	0	3	112	15,692	3	0	3	114
				TFTM	14,695	2	0	3	106	15,830	3	0	3	115	16,030	3	0	3	116
				T5VS	15,283	4	0	1	111	16,464	4	0	1	119	16,672	4	0	1	121
				T5S	15,295	3	0	1	111	16,477	4	0	1	119	16,686	4	0	1	121
				T5M	15,257	4	0	2	111	16,435	4	0	2	119	16,644	4	0	2	121
				T5W	15,157	4	0	3	110	16,328	4	0	3	118	16,534	4	0	3	120
				BLC	12,048	1	0	2	87	12,979	1	0	2	94	13,143	1	0	2	95
				LCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71
				RCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71

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Performance Data

Lumen Output

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Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
40	1250	**P6**	163W	T1S	17,654	3	0	3	108	19,018	3	0	3	117	19,259	3	0	3	118
				T2S	17,635	3	0	3	108	18,998	3	0	3	117	19,238	3	0	3	118
				T2M	17,726	3	0	3	109	19,096	3	0	3	117	19,337	3	0	3	119
				T3S	17,167	3	0	3	105	18,493	3	0	3	113	18,727	3	0	3	115
				T3M	17,683	3	0	3	108	19,049	3	0	3	117	19,290	3	0	3	118
				T4M	17,299	3	0	3	106	18,635	3	0	4	114	18,871	3	0	4	116
				TFTM	17,672	3	0	3	108	19,038	3	0	4	117	19,279	3	0	4	118
				T5VS	18,379	4	0	1	113	19,800	4	0	1	121	20,050	4	0	1	123
				T5S	18,394	4	0	2	113	19,816	4	0	2	122	20,066	4	0	2	123
				T5M	18,348	4	0	2	113	19,766	4	0	2	121	20,016	4	0	2	123
				T5W	18,228	5	0	3	112	19,636	5	0	3	120	19,885	5	0	3	122
				BLC	14,489	2	0	2	89	15,609	2	0	3	96	15,806	2	0	3	97
				LCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
				RCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
40	1400	**P7**	183W	T1S	19,227	3	0	3	105	20,712	3	0	3	113	20,975	3	0	3	115
				T2S	19,206	3	0	3	105	20,690	3	0	3	113	20,952	3	0	3	114
				T2M	19,305	3	0	3	105	20,797	3	0	3	114	21,060	3	0	3	115
				T3S	18,696	3	0	3	102	20,141	3	0	3	110	20,396	3	0	4	111
				T3M	19,258	3	0	3	105	20,746	3	0	3	113	21,009	3	0	3	115
				T4M	18,840	3	0	4	103	20,296	3	0	4	111	20,553	3	0	4	112
				TFTM	19,246	3	0	4	105	20,734	3	0	4	113	20,996	3	0	4	115
				T5VS	20,017	4	0	1	109	21,564	4	0	1	118	21,837	4	0	1	119
				T5S	20,033	4	0	2	109	21,581	4	0	2	118	21,854	4	0	2	119
				T5M	19,983	4	0	2	109	21,527	5	0	3	118	21,799	5	0	3	119
				T5W	19,852	5	0	3	108	21,386	5	0	3	117	21,656	5	0	3	118
				BLC	15,780	2	0	3	86	16,999	2	0	3	93	17,214	2	0	3	94
				LCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
				RCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
60	1050	**P8**	207W	T1S	22,490	3	0	3	109	24,228	3	0	3	117	24,535	3	0	3	119
				T2S	22,466	3	0	4	109	24,202	3	0	4	117	24,509	3	0	4	118
				T2M	22,582	3	0	3	109	24,327	3	0	3	118	24,635	3	0	3	119
				T3S	21,870	3	0	4	106	23,560	3	0	4	114	23,858	3	0	4	115
				T3M	22,527	3	0	4	109	24,268	3	0	4	117	24,575	3	0	4	119
				T4M	22,038	3	0	4	106	23,741	3	0	4	115	24,041	3	0	4	116
				TFTM	22,513	3	0	4	109	24,253	3	0	4	117	24,560	3	0	4	119
				T5VS	23,415	5	0	1	113	25,224	5	0	1	122	25,543	5	0	1	123
				T5S	23,434	4	0	2	113	25,244	4	0	2	122	25,564	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,221	5	0	4	112	25,016	5	0	4	121	25,332	5	0	4	122
				BLC	18,458	2	0	3	89	19,885	2	0	3	96	20,136	2	0	3	97
				LCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
60	1250	**P9**	241W	T1S	25,575	3	0	3	106	27,551	3	0	3	114	27,900	3	0	3	116
				T2S	25,548	3	0	4	106	27,522	3	0	4	114	27,871	3	0	4	116
				T2M	25,680	3	0	3	107	27,664	3	0	3	115	28,014	3	0	3	116
				T3S	24,870	3	0	4	103	26,791	3	0	4	111	27,130	3	0	4	113
				T3M	25,617	3	0	4	106	27,597	3	0	4	115	27,946	3	0	4	116
				T4M	25,061	3	0	4	104	26,997	3	0	4	112	27,339	3	0	4	113
				TFTM	25,602	3	0	4	106	27,580	3	0	4	114	27,929	3	0	4	116
				T5VS	26,626	5	0	1	110	28,684	5	0	1	119	29,047	5	0	1	121
				T5S	26,648	4	0	2	111	28,707	5	0	2	119	29,070	5	0	2	121
				T5M	26,581	5	0	3	110	28,635	5	0	3	119	28,997	5	0	3	120
				T5W	26,406	5	0	4	110	28,447	5	0	4	118	28,807	5	0	4	120
				BLC	20,990	2	0	3	87	22,612	2	0	3	94	22,898	2	0	3	95
				LCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71
				RCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71

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Performance Data

Lumen Output

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Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
60	530	**P10**	106W	T1S	13,042	3	0	3	123	14,050	3	0	3	133	14,228	3	0	3	134
				T2S	12,967	4	0	4	122	13,969	4	0	4	132	14,146	4	0	4	133
				T2M	13,201	3	0	3	125	14,221	3	0	3	134	14,401	3	0	3	136
				T3S	12,766	4	0	4	120	13,752	4	0	4	130	13,926	4	0	4	131
				T3M	13,193	4	0	4	124	14,213	4	0	4	134	14,393	4	0	4	136
				T4M	12,944	4	0	4	122	13,945	4	0	4	132	14,121	4	0	4	133
				TFTM	13,279	4	0	4	125	14,305	4	0	4	135	14,486	4	0	4	137
				T5VS	13,372	3	0	1	126	14,405	4	0	1	136	14,588	4	0	1	138
				T5S	13,260	3	0	1	125	14,284	3	0	1	135	14,465	3	0	1	136
				T5M	13,256	4	0	2	125	14,281	4	0	2	135	14,462	4	0	2	136
				T5W	13,137	4	0	3	124	14,153	4	0	3	134	14,332	4	0	3	135
				BLC	10,906	3	0	3	103	11,749	3	0	3	111	11,898	3	0	3	112
				LCCO	7,789	1	0	3	73	8,391	1	0	3	79	8,497	1	0	3	80
				RCCO	7,779	4	0	4	73	8,380	4	0	4	79	8,486	4	0	4	80
60	700	**P11**	137W	T1S	16,556	3	0	3	121	17,835	3	0	3	130	18,061	4	0	4	132
				T2S	16,461	4	0	4	120	17,733	4	0	4	129	17,957	4	0	4	131
				T2M	16,758	4	0	4	122	18,053	4	0	4	132	18,281	4	0	4	133
				T3S	16,205	4	0	4	118	17,457	4	0	4	127	17,678	4	0	4	129
				T3M	16,748	4	0	4	122	18,042	4	0	4	132	18,271	4	0	4	133
				T4M	16,432	4	0	4	120	17,702	4	0	4	129	17,926	4	0	4	131
				TFTM	16,857	4	0	4	123	18,159	4	0	4	133	18,389	4	0	4	134
				T5VS	16,975	4	0	1	124	18,287	4	0	1	133	18,518	4	0	1	135
				T5S	16,832	4	0	1	123	18,133	4	0	2	132	18,362	4	0	2	134
				T5M	16,828	4	0	2	123	18,128	4	0	2	132	18,358	4	0	2	134
				T5W	16,677	4	0	3	122	17,966	5	0	3	131	18,193	5	0	3	133
				BLC	13,845	3	0	3	101	14,915	3	0	3	109	15,103	3	0	3	110
				LCCO	9,888	1	0	3	72	10,652	2	0	3	78	10,787	2	0	3	79
				RCCO	9,875	4	0	4	72	10,638	4	0	4	78	10,773	4	0	4	79
60	1050	**P12**	207W	T1S	22,996	4	0	4	111	24,773	4	0	4	120	25,087	4	0	4	121
				T2S	22,864	4	0	4	110	24,631	5	0	5	119	24,943	5	0	5	120
				T2M	23,277	4	0	4	112	25,075	4	0	4	121	25,393	4	0	4	123
				T3S	22,509	4	0	4	109	24,248	5	0	5	117	24,555	5	0	5	119
				T3M	23,263	4	0	4	112	25,061	4	0	4	121	25,378	4	0	4	123
				T4M	22,824	5	0	5	110	24,588	5	0	5	119	24,899	5	0	5	120
				TFTM	23,414	5	0	5	113	25,223	5	0	5	122	25,543	5	0	5	123
				T5VS	23,579	5	0	1	114	25,401	5	0	1	123	25,722	5	0	1	124
				T5S	23,380	4	0	2	113	25,187	4	0	2	122	25,506	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,165	5	0	4	112	24,955	5	0	4	121	25,271	5	0	4	122
				BLC	19,231	4	0	4	93	20,717	4	0	4	100	20,979	4	0	4	101
				LCCO	13,734	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,716	4	0	4	66	14,776	4	0	4	71	14,963	4	0	4	72
60	1250	**P13**	231W	T1S	25,400	4	0	4	110	27,363	4	0	4	118	27,709	4	0	4	120
				T2S	25,254	5	0	5	109	27,205	5	0	5	118	27,550	5	0	5	119
				T2M	25,710	4	0	4	111	27,696	4	0	4	120	28,047	4	0	4	121
				T3S	24,862	5	0	5	108	26,783	5	0	5	116	27,122	5	0	5	117
				T3M	25,695	5	0	5	111	27,680	5	0	5	120	28,031	5	0	5	121
				T4M	25,210	5	0	5	109	27,158	5	0	5	118	27,502	5	0	5	119
				TFTM	25,861	5	0	5	112	27,860	5	0	5	121	28,212	5	0	5	122
				T5VS	26,043	5	0	1	113	28,056	5	0	1	121	28,411	5	0	1	123
				T5S	25,824	4	0	2	112	27,819	5	0	2	120	28,172	5	0	2	122
				T5M	25,818	5	0	3	112	27,813	5	0	3	120	28,165	5	0	3	122
				T5W	25,586	5	0	4	111	27,563	5	0	4	119	27,912	5	0	4	121
				BLC	21,241	4	0	4	92	22,882	4	0	4	99	23,172	4	0	4	100
				LCCO	15,170	2	0	4	66	16,342	2	0	4	71	16,549	2	0	4	72
				RCCO	15,150	5	0	5	66	16,321	5	0	5	71	16,527	5	0	5	72

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FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS
The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensors with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 30 feet.

nLIGHT AIR CONTROLS
The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basi motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling patter (template #8). NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40ºC minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

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D-Series Size 1
LED Area Luminaire

Catalog Number: DSX1 LED-P9-50K-T4M-MVOLT-SPA-DDBXD

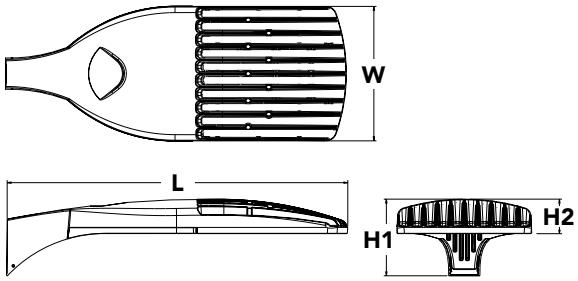
Notes: S4 Fixture

Type:

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED	P9	50K	T4M	MVOLT	SPA
Series	**LEDs**	**Color temperature**	**Distribution**	**Voltage**	**Mounting**

Series
- DSX1 LED

LEDs
- **Forward optics**
- P1, P2, P3, P4[1], P5[1], P6[1], P7[1], P8, P9[1]
- **Rotated optics**
- P10[2], P11[2], P12[2], P13[1,2]

Color temperature
- 30K 3000 K
- 40K 4000 K
- 50K 5000 K

Distribution
- T1S Type I short (Automotive)
- T2S Type II short
- T2M Type II medium
- T3S Type III short
- T3M Type III medium
- T4M Type IV medium
- TFTM Forward throw medium
- T5VS Type V very short[3]
- T5S Type V short[3]
- T5M Type V medium[3]
- T5W Type V wide[3]
- BLC Backlight control[4]
- LCCO Left corner cutoff[4]
- RCCO Right corner cutoff[4]

Voltage
- MVOLT[5]
- 120[6]
- 208[6]
- 240[6]
- 277[6]
- 347[6]
- 480[6]

Mounting
- **Shipped included**
- SPA Square pole mounting
- RPA Round pole mounting[7]
- WBA Wall bracket[3]
- SPUMBA Square pole universal mounting adaptor[8]
- RPUMBA Round pole universal mounting adaptor[8]
- **Shipped separately**
- KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[9]

DDBXD

Control options

Shipped installed
- NLTAIR2 nLight AIR generation 2 enabled[10]
- PIRHN Network, high/low motion/ambient sensor[11]
- PER NEMA twist-lock receptacle only (controls ordered separate)[12]
- PER5 Five-pin receptacle only (controls ordered separate)[12,13]
- PER7 Seven-pin receptacle only (controls ordered separate)[12,13]
- DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[14]
- DS Dual switching[15,16,17]
- PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[17,18]
- PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[17,18]
- PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[17,18]
- PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[17,18]
- FAO Field adjustable output[17,19]

Other options

Shipped installed
- HS House-side shield[20]
- SF Single fuse (120, 277, 347V)[6]
- DF Double fuse (208, 240, 480V)[6]
- L90 Left rotated optics[2]
- R90 Right rotated optics[2]
- HA 50°C ambient operations[1]

Shipped separately
- BS Bird spikes[21]
- EGS External glare shield

Finish *(required)*
- DDBXD Dark bronze
- DBLXD Black
- DNAXD Natural aluminum
- DWHXD White
- DDBTXD Textured dark bronze
- DBLBXD Textured black
- DNATXD Textured natural aluminum
- DWHGXD Textured white

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Ordering Information

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [22]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [22]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [22]
DSHORT SBK U	Shorting cap [22]
DSX1HS 30C U	House-side shield for P1, P2, P3, P4 and P5 [20]
DSX1HS 40C U	House-side shield for P6 and P7 [20]
DSX1HS 60C U	House-side shield for P8, P9, P10, P11 and P12 [20]
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish) [23]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [9]
DSX1EGS (FINISH) U	External glare shield

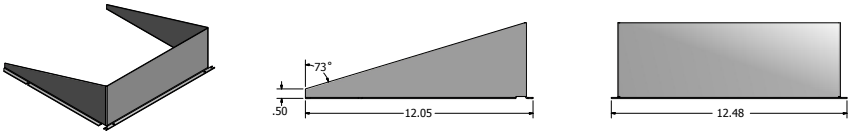
For more control options, visit DTL and ROAM online.

NOTES

1 HA not available with P4, P5, P6, P7, P9 and P13.
2 P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
3 Any Type 5 distribution with photocell, is not available with WBA.
4 Not available with HS.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
6 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
7 Suitable for mounting to round poles between 3.5" and 12" diameter.
8 Universal mounting brackets intended for retrofit on existing, pre-drilled poles only. 1.5 G vibration load rating per ANCI C136.31. Only usable when pole's drill pattern is NOT Lithonia templa #8
9 Must order fixture with SPA option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" diameter mast arm (not included).
10 Must be ordered with PIRHN. Sensor cover available only in dark bronze, black, white and natural aluminum colors.
11 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this link.
12 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting cap included.
13 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Node with integral dimming.
14 DMG not available with PIRHN, PER5, PER7, PIR, PIRH, PIR1FC3V or PIRH1FC3V, FAO.
15 Provides 50/50fixture operation via (2) independent drivers. Not available with PER, PER5, PER7, PIR or PIRH. Not available P1, P2, P3, P4 or P5.
16 Requires (2) separately switched circuits with isolated neutrol.
17 Reference Controls Option Default settings table on page 4.
18 Reference Motion Sensor table on page 4 to see functionality.
19 Not available with other dimming controls options
20 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
21 Must be ordered with fixture for factory pre-drilling.
22 Requires luminaire to be specified with PER, PER5 or PER7 option. See Control Option Table on page 4.
23 For retrofit use only. Only usable when pole's drill pattern is NOT Lithonia template #8

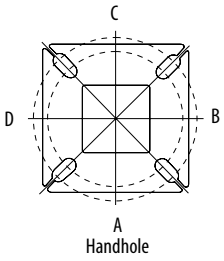
Options

EGS - External Glare Shield

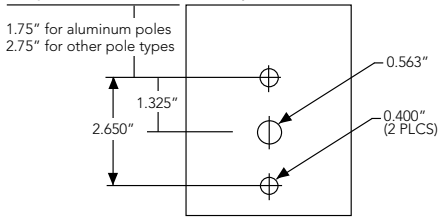


Drilling

HANDHOLE ORIENTATION



Template #8



Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS

DSX1 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 LED	1.013	2.025	1.945	3.038	2.850	3.749

	Drilling Template	Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"	3.5"	4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

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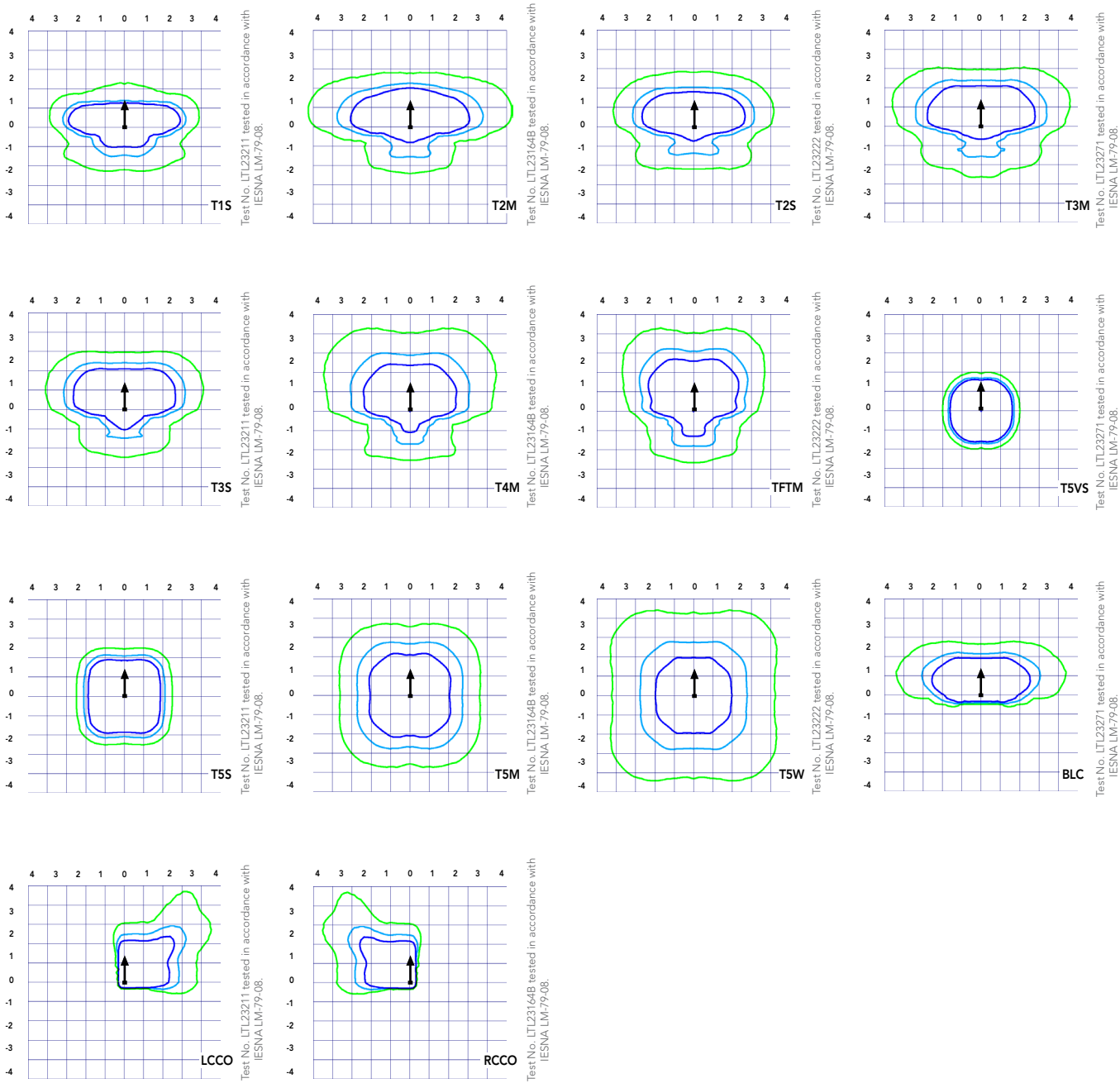
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 1 homepage.

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').

LEGEND
- 0.1 fc
- 0.5 fc
- 1.0 fc



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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.96
50,000	0.92
100,000	0.85

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Phototcell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use when motion sensor is used as dusk to dawn control.						

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	530	54	0.45	0.26	0.23	0.19	0.10	0.12
	P2	30	700	70	0.59	0.34	0.30	0.25	0.20	0.16
	P3	30	1050	102	0.86	0.50	0.44	0.38	0.30	0.22
	P4	30	1250	125	1.06	0.60	0.52	0.46	0.37	0.27
	P5	30	1400	138	1.16	0.67	0.58	0.51	0.40	0.29
	P6	40	1250	163	1.36	0.78	0.68	0.59	0.47	0.34
	P7	40	1400	183	1.53	0.88	0.76	0.66	0.53	0.38
	P8	60	1050	207	1.74	0.98	0.87	0.76	0.64	0.49
	P9	60	1250	241	2.01	1.16	1.01	0.89	0.70	0.51
Rotated Optics (Requires L90 or R90)	P10	60	530	106	0.90	0.52	0.47	0.43	0.33	0.27
	P11	60	700	137	1.15	0.67	0.60	0.53	0.42	0.32
	P12	60	1050	207	1.74	0.99	0.87	0.76	0.60	0.46
	P13	60	1250	231	1.93	1.12	0.97	0.86	0.67	0.49

Controls Options				
Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell recepticle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell. PIR for 8-15' mounting; PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBGR	Also available with PIRH1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSDGR	nLight AIR sensors can be programmed and commissione from the ground using the CIAIRity Pro app.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	P1	54W	T1S	6,457	2	0	2	120	6,956	2	0	2	129	7,044	2	0	2	130
				T2S	6,450	2	0	2	119	6,949	2	0	2	129	7,037	2	0	2	130
				T2M	6,483	1	0	1	120	6,984	2	0	2	129	7,073	2	0	2	131
				T3S	6,279	2	0	2	116	6,764	2	0	2	125	6,850	2	0	2	127
				T3M	6,468	1	0	2	120	6,967	1	0	2	129	7,056	1	0	2	131
				T4M	6,327	1	0	2	117	6,816	1	0	2	126	6,902	1	0	2	128
				TFTM	6,464	1	0	2	120	6,963	1	0	2	129	7,051	1	0	2	131
				T5VS	6,722	2	0	0	124	7,242	3	0	0	134	7,334	3	0	0	136
				T5S	6,728	2	0	1	125	7,248	2	0	1	134	7,340	2	0	1	136
				T5M	6,711	3	0	1	124	7,229	3	0	1	134	7,321	3	0	2	136
				T5W	6,667	3	0	2	123	7,182	3	0	2	133	7,273	3	0	2	135
				BLC	5,299	1	0	1	98	5,709	1	0	2	106	5,781	1	0	2	107
				LCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
				RCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
30	700	P2	70W	T1S	8,249	2	0	2	118	8,886	2	0	2	127	8,999	2	0	2	129
				T2S	8,240	2	0	2	118	8,877	2	0	2	127	8,989	2	0	2	128
				T2M	8,283	2	0	2	118	8,923	2	0	2	127	9,036	2	0	2	129
				T3S	8,021	2	0	2	115	8,641	2	0	2	123	8,751	2	0	2	125
				T3M	8,263	2	0	2	118	8,901	2	0	2	127	9,014	2	0	2	129
				T4M	8,083	2	0	2	115	8,708	2	0	2	124	8,818	2	0	2	126
				TFTM	8,257	2	0	2	118	8,896	2	0	2	127	9,008	2	0	2	129
				T5VS	8,588	3	0	0	123	9,252	3	0	0	132	9,369	3	0	0	134
				T5S	8,595	3	0	1	123	9,259	3	0	1	132	9,376	3	0	1	134
				T5M	8,573	3	0	2	122	9,236	3	0	2	132	9,353	3	0	2	134
				T5W	8,517	3	0	2	122	9,175	4	0	2	131	9,291	4	0	2	133
				BLC	6,770	1	0	2	97	7,293	1	0	2	104	7,386	1	0	2	106
				LCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
				RCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
30	1050	P3	102W	T1S	11,661	2	0	2	114	12,562	3	0	3	123	12,721	3	0	3	125
				T2S	11,648	2	0	2	114	12,548	3	0	3	123	12,707	3	0	3	125
				T2M	11,708	2	0	2	115	12,613	2	0	2	124	12,773	2	0	2	125
				T3S	11,339	2	0	2	111	12,215	3	0	3	120	12,370	3	0	3	121
				T3M	11,680	2	0	2	115	12,582	2	0	2	123	12,742	2	0	2	125
				T4M	11,426	2	0	3	112	12,309	2	0	3	121	12,465	2	0	3	122
				TFTM	11,673	2	0	2	114	12,575	2	0	3	123	12,734	2	0	3	125
				T5VS	12,140	3	0	1	119	13,078	3	0	1	128	13,244	3	0	1	130
				T5S	12,150	3	0	1	119	13,089	3	0	1	128	13,254	3	0	1	130
				T5M	12,119	4	0	2	119	13,056	4	0	2	128	13,221	4	0	2	130
				T5W	12,040	4	0	3	118	12,970	4	0	3	127	13,134	4	0	3	129
				BLC	9,570	1	0	2	94	10,310	1	0	2	101	10,440	1	0	2	102
				LCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
				RCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
30	1250	P4	125W	T1S	13,435	3	0	3	107	14,473	3	0	3	116	14,657	3	0	3	117
				T2S	13,421	3	0	3	107	14,458	3	0	3	116	14,641	3	0	3	117
				T2M	13,490	2	0	2	108	14,532	3	0	3	116	14,716	3	0	3	118
				T3S	13,064	3	0	3	105	14,074	3	0	3	113	14,252	3	0	3	114
				T3M	13,457	2	0	2	108	14,497	2	0	2	116	14,681	2	0	2	117
				T4M	13,165	2	0	3	105	14,182	2	0	3	113	14,362	2	0	3	115
				TFTM	13,449	2	0	3	108	14,488	2	0	3	116	14,672	2	0	3	117
				T5VS	13,987	4	0	1	112	15,068	4	0	1	121	15,259	4	0	1	122
				T5S	13,999	3	0	1	112	15,080	3	0	1	121	15,271	3	0	1	122
				T5M	13,963	4	0	2	112	15,042	4	0	2	120	15,233	4	0	2	122
				T5W	13,872	4	0	3	111	14,944	4	0	3	120	15,133	4	0	3	121
				BLC	11,027	1	0	2	88	11,879	1	0	2	95	12,029	1	0	2	96
				LCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
				RCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
30	1400	P5	138W	T1S	14,679	3	0	3	106	15,814	3	0	3	115	16,014	3	0	3	116
				T2S	14,664	3	0	3	106	15,797	3	0	3	114	15,997	3	0	3	116
				T2M	14,739	3	0	3	107	15,878	3	0	3	115	16,079	3	0	3	117
				T3S	14,274	3	0	3	103	15,377	3	0	3	111	15,572	3	0	3	113
				T3M	14,704	2	0	3	107	15,840	3	0	3	115	16,040	3	0	3	116
				T4M	14,384	2	0	3	104	15,496	3	0	3	112	15,692	3	0	3	114
				TFTM	14,695	2	0	3	106	15,830	3	0	3	115	16,030	3	0	3	116
				T5VS	15,283	4	0	1	111	16,464	4	0	1	119	16,672	4	0	1	121
				T5S	15,295	3	0	1	111	16,477	4	0	1	119	16,686	4	0	1	121
				T5M	15,257	4	0	2	111	16,435	4	0	2	119	16,644	4	0	2	121
				T5W	15,157	4	0	3	110	16,328	4	0	3	118	16,534	4	0	3	120
				BLC	12,048	1	0	2	87	12,979	1	0	2	94	13,143	1	0	2	95
				LCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71
				RCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71

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Performance Data

Lumen Output

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Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
40	1250	**P6**	163W	T1S	17,654	3	0	3	108	19,018	3	0	3	117	19,259	3	0	3	118
				T2S	17,635	3	0	3	108	18,998	3	0	3	117	19,238	3	0	3	118
				T2M	17,726	3	0	3	109	19,096	3	0	3	117	19,337	3	0	3	119
				T3S	17,167	3	0	3	105	18,493	3	0	3	113	18,727	3	0	3	115
				T3M	17,683	3	0	3	108	19,049	3	0	3	117	19,290	3	0	3	118
				T4M	17,299	3	0	3	106	18,635	3	0	4	114	18,871	3	0	4	116
				TFTM	17,672	3	0	3	108	19,038	3	0	4	117	19,279	3	0	4	118
				T5VS	18,379	4	0	1	113	19,800	4	0	1	121	20,050	4	0	1	123
				T5S	18,394	4	0	2	113	19,816	4	0	2	122	20,066	4	0	2	123
				T5M	18,348	4	0	2	113	19,766	4	0	2	121	20,016	4	0	2	123
				T5W	18,228	5	0	3	112	19,636	5	0	3	120	19,885	5	0	3	122
				BLC	14,489	2	0	2	89	15,609	2	0	3	96	15,806	2	0	3	97
				LCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
				RCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
40	1400	**P7**	183W	T1S	19,227	3	0	3	105	20,712	3	0	3	113	20,975	3	0	3	115
				T2S	19,206	3	0	3	105	20,690	3	0	3	113	20,952	3	0	3	114
				T2M	19,305	3	0	3	105	20,797	3	0	3	114	21,060	3	0	3	115
				T3S	18,696	3	0	3	102	20,141	3	0	3	110	20,396	3	0	4	111
				T3M	19,258	3	0	3	105	20,746	3	0	3	113	21,009	3	0	3	115
				T4M	18,840	3	0	4	103	20,296	3	0	4	111	20,553	3	0	4	112
				TFTM	19,246	3	0	4	105	20,734	3	0	4	113	20,996	3	0	4	115
				T5VS	20,017	4	0	1	109	21,564	4	0	1	118	21,837	4	0	1	119
				T5S	20,033	4	0	2	109	21,581	4	0	2	118	21,854	4	0	2	119
				T5M	19,983	4	0	2	109	21,527	5	0	3	118	21,799	5	0	3	119
				T5W	19,852	5	0	3	108	21,386	5	0	3	117	21,656	5	0	3	118
				BLC	15,780	2	0	3	86	16,999	2	0	3	93	17,214	2	0	3	94
				LCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
				RCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
60	1050	**P8**	207W	T1S	22,490	3	0	3	109	24,228	3	0	3	117	24,535	3	0	3	119
				T2S	22,466	3	0	4	109	24,202	3	0	4	117	24,509	3	0	4	118
				T2M	22,582	3	0	3	109	24,327	3	0	3	118	24,635	3	0	3	119
				T3S	21,870	3	0	4	106	23,560	3	0	4	114	23,858	3	0	4	115
				T3M	22,527	3	0	4	109	24,268	3	0	4	117	24,575	3	0	4	119
				T4M	22,038	3	0	4	106	23,741	3	0	4	115	24,041	3	0	4	116
				TFTM	22,513	3	0	4	109	24,253	3	0	4	117	24,560	3	0	4	119
				T5VS	23,415	5	0	1	113	25,224	5	0	1	122	25,543	5	0	1	123
				T5S	23,434	4	0	2	113	25,244	4	0	2	122	25,564	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,221	5	0	4	112	25,016	5	0	4	121	25,332	5	0	4	122
				BLC	18,458	2	0	3	89	19,885	2	0	3	96	20,136	2	0	3	97
				LCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
60	1250	**P9**	241W	T1S	25,575	3	0	3	106	27,551	3	0	3	114	27,900	3	0	3	116
				T2S	25,548	3	0	4	106	27,522	3	0	4	114	27,871	3	0	4	116
				T2M	25,680	3	0	3	107	27,664	3	0	3	115	28,014	3	0	3	116
				T3S	24,870	3	0	4	103	26,791	3	0	4	111	27,130	3	0	4	113
				T3M	25,617	3	0	4	106	27,597	3	0	4	115	27,946	3	0	4	116
				T4M	25,061	3	0	4	104	26,997	3	0	4	112	27,339	3	0	4	113
				TFTM	25,602	3	0	4	106	27,580	3	0	4	114	27,929	3	0	4	116
				T5VS	26,626	5	0	1	110	28,684	5	0	1	119	29,047	5	0	1	121
				T5S	26,648	4	0	2	111	28,707	5	0	2	119	29,070	5	0	2	121
				T5M	26,581	5	0	3	110	28,635	5	0	3	119	28,997	5	0	3	120
				T5W	26,406	5	0	4	110	28,447	5	0	4	118	28,807	5	0	4	120
				BLC	20,990	2	0	3	87	22,612	2	0	3	94	22,898	2	0	3	95
				LCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71
				RCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71

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Performance Data

Lumen Output

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Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
60	530	**P10**	106W	T1S	13,042	3	0	3	123	14,050	3	0	3	133	14,228	3	0	3	134
				T2S	12,967	4	0	4	122	13,969	4	0	4	132	14,146	4	0	4	133
				T2M	13,201	3	0	3	125	14,221	3	0	3	134	14,401	3	0	3	136
				T3S	12,766	4	0	4	120	13,752	4	0	4	130	13,926	4	0	4	131
				T3M	13,193	4	0	4	124	14,213	4	0	4	134	14,393	4	0	4	136
				T4M	12,944	4	0	4	122	13,945	4	0	4	132	14,121	4	0	4	133
				TFTM	13,279	4	0	4	125	14,305	4	0	4	135	14,486	4	0	4	137
				T5VS	13,372	3	0	1	126	14,405	4	0	1	136	14,588	4	0	1	138
				T5S	13,260	3	0	1	125	14,284	3	0	1	135	14,465	3	0	1	136
				T5M	13,256	4	0	2	125	14,281	4	0	2	135	14,462	4	0	2	136
				T5W	13,137	4	0	3	124	14,153	4	0	3	134	14,332	4	0	3	135
				BLC	10,906	3	0	3	103	11,749	3	0	3	111	11,898	3	0	3	112
				LCCO	7,789	1	0	3	73	8,391	1	0	3	79	8,497	1	0	3	80
				RCCO	7,779	4	0	4	73	8,380	4	0	4	79	8,486	4	0	4	80
60	700	**P11**	137W	T1S	16,556	3	0	3	121	17,835	3	0	3	130	18,061	4	0	4	132
				T2S	16,461	4	0	4	120	17,733	4	0	4	129	17,957	4	0	4	131
				T2M	16,758	4	0	4	122	18,053	4	0	4	132	18,281	4	0	4	133
				T3S	16,205	4	0	4	118	17,457	4	0	4	127	17,678	4	0	4	129
				T3M	16,748	4	0	4	122	18,042	4	0	4	132	18,271	4	0	4	133
				T4M	16,432	4	0	4	120	17,702	4	0	4	129	17,926	4	0	4	131
				TFTM	16,857	4	0	4	123	18,159	4	0	4	133	18,389	4	0	4	134
				T5VS	16,975	4	0	1	124	18,287	4	0	1	133	18,518	4	0	1	135
				T5S	16,832	4	0	1	123	18,133	4	0	2	132	18,362	4	0	2	134
				T5M	16,828	4	0	2	123	18,128	4	0	2	132	18,358	4	0	2	134
				T5W	16,677	4	0	3	122	17,966	5	0	3	131	18,193	5	0	3	133
				BLC	13,845	3	0	3	101	14,915	3	0	3	109	15,103	3	0	3	110
				LCCO	9,888	1	0	3	72	10,652	2	0	3	78	10,787	2	0	3	79
				RCCO	9,875	4	0	4	72	10,638	4	0	4	78	10,773	4	0	4	79
60	1050	**P12**	207W	T1S	22,996	4	0	4	111	24,773	4	0	4	120	25,087	4	0	4	121
				T2S	22,864	4	0	4	110	24,631	5	0	5	119	24,943	5	0	5	120
				T2M	23,277	4	0	4	112	25,075	4	0	4	121	25,393	4	0	4	123
				T3S	22,509	4	0	4	109	24,248	5	0	5	117	24,555	5	0	5	119
				T3M	23,263	4	0	4	112	25,061	4	0	4	121	25,378	4	0	4	123
				T4M	22,824	5	0	5	110	24,588	5	0	5	119	24,899	5	0	5	120
				TFTM	23,414	5	0	5	113	25,223	5	0	5	122	25,543	5	0	5	123
				T5VS	23,579	5	0	1	114	25,401	5	0	1	123	25,722	5	0	1	124
				T5S	23,380	4	0	2	113	25,187	4	0	2	122	25,506	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,165	5	0	4	112	24,955	5	0	4	121	25,271	5	0	4	122
				BLC	19,231	4	0	4	93	20,717	4	0	4	100	20,979	4	0	4	101
				LCCO	13,734	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,716	4	0	4	66	14,776	4	0	4	71	14,963	4	0	4	72
60	1250	**P13**	231W	T1S	25,400	4	0	4	110	27,363	4	0	4	118	27,709	4	0	4	120
				T2S	25,254	5	0	5	109	27,205	5	0	5	118	27,550	5	0	5	119
				T2M	25,710	4	0	4	111	27,696	4	0	4	120	28,047	4	0	4	121
				T3S	24,862	5	0	5	108	26,783	5	0	5	116	27,122	5	0	5	117
				T3M	25,695	5	0	5	111	27,680	5	0	5	120	28,031	5	0	5	121
				T4M	25,210	5	0	5	109	27,158	5	0	5	118	27,502	5	0	5	119
				TFTM	25,861	5	0	5	112	27,860	5	0	5	121	28,212	5	0	5	122
				T5VS	26,043	5	0	1	113	28,056	5	0	1	121	28,411	5	0	1	123
				T5S	25,824	4	0	2	112	27,819	5	0	2	120	28,172	5	0	2	122
				T5M	25,818	5	0	3	112	27,813	5	0	3	120	28,165	5	0	3	122
				T5W	25,586	5	0	4	111	27,563	5	0	4	119	27,912	5	0	4	121
				BLC	21,241	4	0	4	92	22,882	4	0	4	99	23,172	4	0	4	100
				LCCO	15,170	2	0	4	66	16,342	2	0	4	71	16,549	2	0	4	72
				RCCO	15,150	5	0	5	66	16,321	5	0	5	71	16,527	5	0	5	72

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FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS
The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensors with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 30 feet.

nLIGHT AIR CONTROLS
The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basi motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling patter (template #8). NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40ºC minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

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LITHONIA LIGHTING®

Catalog Number	SSS-25-4C-DM19AS-DDBXD
Notes	S4 Pole
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — These specifications are for USA standards only. Check with factory for Canadian specifications. Square Straight Steel is a general purpose light pole for up to 39-foot mounting heights. This pole provides a robust yet cost effective option for mounting area lights and floodlights.

CONSTRUCTION — Pole Shaft: The pole shaft is of uniform dimension and wall thickness and is made of a weldable-grade, hot-rolled, commercial-quality steel tubing with a minimum yield of 55 KSI (11-gauge, .1196"), or 50 KSI (7-gauge, .1793"). Shaft is one-piece with a full-length longitudinal high-frequency electric resistance weld. Uniformly square in cross-section with flat sides, small corner radii and excellent torsional qualities. Available shaft widths are 4", 5" and 6".

Pole Top: A flush non-metalic black top cap is provided for all poles that will receive drilling patterns for side-mount luminaire arm assemblies or when ordered with PT option.

Handhole: A reinforced handhole with grounding provision is provided at 18" from the base on side A. Positioning the handhole lower may not be possible and requires engineering review; consult Tech Support-Outdoor for further information. Every handhole includes a cover and cover attachment hardware. The handhole has a nominal dimension of 2.5" x 5".

Base Cover: A durable ABS plastic two-piece full base cover, finished to match the pole, is provided with each pole assembly. Additional base cover options are available upon request.

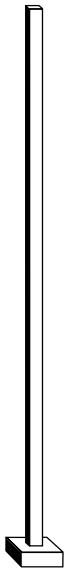
Anchor Base/ Bolts: Anchor base is fabricated from steel that meets ASTM A36 standards and can be altered to match existing foundations; consult factory for modifications. Anchor bolts are manufactured to ASTM F1554 Standards grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Top threaded portion (nominal 12") is hot-dipped galvanized per ASTM A-153.

HARDWARE – All structural fasteners are high-strength galvanized carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.

FINISH – Extra durable standard powder-coat finishes include Dark Bronze, White, Black, Medium Bronze and Natural Aluminum colors. Classic finishes include Sandstone, Charcoal Gray, Tennis Green, Bright Red and Steel Blue colors. Architectural Colors and Special Finishes are available by quote and include, but are not limited to Hot-dipped Galvanized, Paint over Hot-dipped Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes. Factory-applied primer paint finish is available for customer field-paint applications.

WARRANTY — 1-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.



Anchor Base Pol

SS

SQUARE STRAIGHT STE

See footnotes next page.

Attachment: Site Lighting Fixture Submittal_09.25.2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

SSS Square Straight Steel Poles

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative. **Example:** SSS 20 5C DM19 DDB

SSS	25	4C	DM19AS			DDBXD
Series	**Nominal fixture mounting height**	**Nominal shaft base size/wall thickness[1]**	**Mounting[2]**		**Options**	**Finish[10]**
SSS	10'-39' (for 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.) See technical information table for complete ordering information.)	4C 4" 11g (.1196") 4G 4" 7g (.1793") 5C 5" 11g (.1196") 5G 5" 7g (.1793") 6G 6" 7g (.1793") See technical information table for complete ordering information.)	Tenon mounting PT Open top (includes top cap) T20 2-3/8" O.D. (2" NPS) T25 2-7/8" O.D. (2-1/2" NPS) T30 3-1/2" O.D. (3" NPS) T35 4" O.D. (3-1/2" NPS) KAC/KAD/KSE/KSF/KVR/KVF Drill mounting[3] DM19 1 at 90° DM28 2 at 180° DM28 PL 2 at 180° with one side plugged DM29 2 at 90° DM39 3 at 90° DM49 4 at 90° CSX/DSX/RSX/AERIS™/OMERO™/ HLA/KAX Drill mounting[3] DM19AS 1 at 90° DM28AS 2 at 180° DM29AS 2 at 90° DM39AS 3 at 90° DM49AS 4 at 90° RAD drill mounting[3] DM19RAD 1 at 90° DM28RAD 2 at 180° DM29RAD 2 at 90° DM32RAD 3 at 120° DM39RAD 3 at 90° DM49RAD 4 at 90°	AERIS™ Suspend drill mounting[3,4] DM19AST_ 1 at 90° DM28AST_ 2 at 180° DM29AST_ 2 at 90° DM39AST_ 3 at 90° DM49AST_ 4 at 90° OMERO™ Suspend drill mounting[3,4] DM19MRT_ 1 at 90° DM28MRT_ 2 at 180° DM29MRT_ 2 at 90° DM39MRT_ 3 at 90° DM49MRT_ 4 at 90°	Shipped installed L/AB Less anchor bolts (Include when anchor bolts are not needed) VD Vibration damper TP Tamper resistant handhole cover fasteners HAxy Horizontal arm bracket (1 fixture)[5,6] FDLxy Festoon outlet less electrical[5] CPL12/xy 1/2" coupling[5] CPL34/xy 3/4" coupling[5] CPL1/xy 1" coupling[5] NPL12/xy 1/2" threaded nipple[5] NPL34/xy 3/4" threaded nipple[5] NPL1/xy 1" threaded nipple[5] EHHxy Extra handhole[5,7] MAEX Match existing[8] USPOM United States point of manufacture[9] IC Interior coating[10] UL UL listed with label (Includes NEC compliant cover) NEC NEC 410.30 compliant gasketed handhole (Not UL Labeled) Shipped separately (replacement kit available) (blank) FBC Full base cover (plastic) (blank) TC Top cap (blank) HHC Handhole cover	Standard colors DDBXD Dark bronze DWHXD White DBLXD Black DMBXD Medium bronze DNAXD Natural aluminum Classic colors DSS Sandstone DGC Charcoal gray DTG Tennis green DBR Bright red DSB Steel blue Architectural Colors and Special Finishes[11] Galvanized, Paint over Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes available.

NOTES:

1. Wall thickness will be signified with a "C" (11 Gauge) or a "G" (7-Gauge) in nomenclature. "C" - 0.1196" | "G" - 0.1793".
2. PT open top poles include top cap. When ordering tenon mounting and drill mounting for the same pole, follow this example: DM28/T20. The combination includes a required extra handhole.
3. Refer to the fixture spec sheet for the correct drilling template pattern and orientation compatibility.
4. Insert "1" or "2" to designate fixture size; e.g. DM19AST**2**.
5. Specify location and orientation when ordering option.
   For "x": Specify the height above the base of pole in feet or feet and inches; separate feet and inches with a "-".
   Example: 5ft = 5 and 20ft 3in = 20-3
   For "y": Specify orientation from handhole (A,B,C,D)
   Refer to the Handhole Orientation diagram below.
   Example: 1/2" coupling at 5'8", orientation C = CPL12/5-8C
6. Horizontal arm is 18" x 2-3/8" O.D. tenon standard, with radius curve providing 12" rise and 2-3/8" O.D. If ordering two horizontal arm at the same height, specify with HAxyy. Example: HA20BD.
7. Combination of tenon-top and drill mount includes extra handhole.
8. Must add original order number of existing pole(s).
9. Use when mill certifications are required.
10. Provides enhanced corrosion resistance.
11. Additional colors available; see www.lithonia.com/archcolors or Architectural Colors brochure (Form No. 794.3). Available by formal quote only, consult factory for details.

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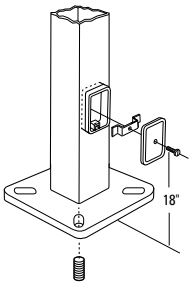
Attachment: Site Lighting Fixture Submittal_09.25.2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

SSS Square Straight Steel Poles

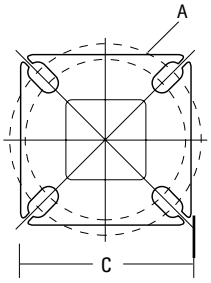
TECHNICAL INFORMATION — EPA (ft2) with 1.3 gust													
Catalog Number	Nominal Shaft Length (ft.)*	Pole Shaft Size (Base in. x Top in. x ft.)	Wall thick (in)	Gauge	EPA (ft^2) with 1.3 gust						Bolt circle (in)	Bolt size (in. x in. x in.)	Approximat ship weigh (lbs.)
					80 MPH	Max. weight	90 MPH	Max. weight	100 MPH	Max. weight			
SSS 10 4C	10	4.0 x 10.0	0.1196	11	30.6	765	23.8	595	18.9	473	8--9	3/4 x 18 x 3	75
SSS 12 4C	12	4.0 x 12.0	0.1196	11	24.4	610	18.8	470	14.8	370	8--9	3/4 x 18 x 3	90
SSS 14 4C	14	4.0 x 14.0	0.1196	11	19.9	498	15.1	378	11.7	293	8--9	3/4 x 18 x 3	100
SSS 16 4C	16	4.0 x 16.0	0.1196	11	15.9	398	11.8	295	8.9	223	8--9	3/4 x 18 x 3	115
SSS 18 4C	18	4.0 x 18.0	0.1196	11	12.6	315	9.2	230	6.7	168	8--9	3/4 x 18 x 3	125
SSS 20 4C	20	4.0 x 20.0	0.1196	11	9.6	240	6.7	167	4.5	150	8--9	3/4 x 18 x 3	140
SSS 20 4G	20	4.0 x 20.0	0.1793	7	14	350	11	275	8	200	8--9	3/4 x 30 x 3	198
SSS 20 5C	20	5.0 x 20.0	0.1196	11	17.7	443	12.7	343	9.4	235	10--12	1 x 36 x 4	185
SSS 20 5G	20	5.0 x 20.0	0.1793	7	28.1	703	21.4	535	16.2	405	10--12	1 x 36 x 4	265
SSS 25 4C	25	4.0 x 25.0	0.1196	11	4.8	150	2.6	100	1	50	8--9	3/4 x 18 x 3	170
SSS 25 4G	25	4.0 x 25.0	0.1793	7	10.8	270	7.7	188	5.4	135	8--9	3/4 x 30 x 3	245
SSS 25 5C	25	5.0 x 25.0	0.1196	11	9.8	245	6.3	157	3.7	150	10--12	1 x 36 x 4	225
SSS 25 5G	25	5.0 x 25.0	0.1793	7	18.5	463	13.3	333	9.5	238	10--12	1 x 36 x 4	360
SSS 30 4G	30	4.0 x 30.0	0.1793	7	6.7	168	4.4	110	2.6	65	8--9	3/4 x 30 x 3	295
SSS 30 5C	30	5.0 x 30.0	0.1196	11	4.7	150	2	50	--	--	10--12	1 x 36 x 4	265
SSS 30 5G	30	5.0 x 30.0	0.1793	7	10.7	267	6.7	167	3.9	100	10--12	1 x 36 x 4	380
SSS 30 6G	30	6.0 x 30.0	0.1793	7	19	475	13.2	330	9	225	11--13	1 x 36 x 4	520
SSS 35 5G	35	5.0 x 35.0	0.1793	7	5.9	150	2.5	100	--	--	10--12	1 x 36 x 4	440
SSS 35 6G	35	6.0 x 35.0	0.1793	7	12.4	310	7.6	190	4.2	105	11--13	1 x 36 x 4	540
SSS 39 6G	39	6.0 x 39.0	0.1793	7	7.2	180	3	75	--	--	11--13	1 x 36 x 4	605

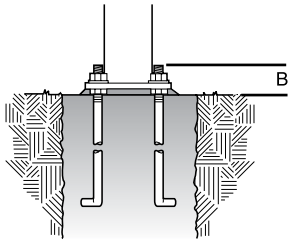
* EPA values are based ASCE 7-93 wind map. For 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.

BASE DETAIL

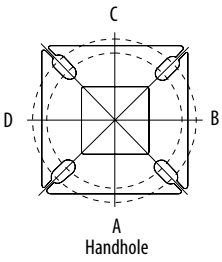


POLE DATA								
Shaft base size	Bolt circle A	Bolt projection B	Base diameter C	Base plate thickness	Template description	Anchor bolt description	Anchor bolt and template number	Anchor bol descriptio
4"C	8" – 9"	3.25"- 3.75"	8"- 8.25"	0.75"	ABTEMPLATE PJ50004	AB18-0	ABSSS-4C	3/4"x18"x3'
4"G	8" – 9"	3.38"- 3.75"	8"- 8.25"	0.875"	ABTEMPLATE PJ50004	AB30-0	ABSSS-4G	3/4"x30"x3'
5"	10" – 12"	3.5"- 4"	11"	1"	ABTEMPLATE PJ50010	AB36-0	ABSSS-5	1"x36"x4"
6"	11" – 13"	4"- 4.50"	12.5"	1"	ABTEMPLATE PJ50011	AB36-0	N/A	1"x36"x4"





HANDHOLE ORIENTATION



Default DM19 is on side B.

IMPORTANT INSTALLATION NOTES:

- **Do not** erect poles without having fixtures install
- Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not ac claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates.
- If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage.
- Lithonia Lighting is not responsible for the foundation design.

Attachment: Site Lighting Fixture Submittal_09.25.2020 (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS,

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MIDWEST
INDUSTRIAL FUNDS
REAL ESTATE INVESTMENT & DEVELOPMENT

February 12, 2021

Ben Vyverberg – Director of Planning and Zoning
Village of Palatine

Re: Palatine Corporate Center (Former Weber-Stephens Property)
Site Noise Narrative

Ben:

Midwest Industrial Funds ("MIF") is excited to be presenting the redevelopment of the former Weber Stephens site located at Sellstrom and Daniels, per the proposed Plat of Subdivision, to the Village of Palatine for preliminary plan approval. The total site as depicted on the proposed Plat of Subdivision consists of 25.3 acres. The plan is to demolish the three existing, obsolete industrial buildings on site and construct new modern industrial buildings that are in demand in the market. Our proposed buildings have been designed in a manner to best meet the needs of users in the market, but also account for neighboring property uses, especially residential. The proposed building designs are vastly different than the buildings that existed on site. Below are a few areas demonstrating how the building designs differ.

First, the existing buildings were constructed long ago with very minimal setbacks from property lines or had key components, integral to the manufacturing operation, located along the north property boundary. The new buildings are designed with buildings setback much further from the north property line. As an example, the northeast existing building is 15' off the property line and our new building is approximately 65' from the property line. The additional setback area will only help to alleviate potential noise issues once Tenants occupy the proposed buildings. In addition, our site design includes a drive lane along the north of the proposed buildings. This north drive will be restricted to car traffic only. All trucks will enter and exit the site at the south entrance in proximity to non-residential uses.

Second, the existing buildings were setup with much of their manufacturing operation, repair operations, respective doors/openings and exterior storage along the north. In reviewing some old aerials, they show significant activities along the immediate north property line. The proposed buildings are being constructed on a speculative basis with no pre-leasing completed. However, the buildings are designed for distribution, light assembly or light manufacturing uses. These are very different uses/operations than the heavy manufacturing that was performed onsite by previous users. The truck courts and dock doors are designed at the interior of the site, facing either east or west, to minimize potential impacts on neighboring residential uses. Further no exterior storage areas are provided along the north property line, in contrast to the previous use. The only doors located along the north are man doors required for emergency exiting and are rarely open. The new buildings interior design is also vastly different than the previous use. Modern distribution users want a 60' open speed bay along the dock area to allow for staging of product, to be loaded into trailers, and open maneuvering area for forklifts loading or unloading trucks. Areas that of operation that are typically noisier are then set further to the interior of the building. Security is also a larger issue for typical Users versus that of a heavy manufacturing operation. The storage or light assembly of finished goods tend to have more value than raw materials or parts that go into a completed product. Therefore, typical users locating in the new buildings will likely secure all doors and not want doors left open.

Lastly, the existing buildings did not provide any site accommodations to assist in shielding activities from neighboring uses. Through discussions with Village of Palatine Staff, we have provided earth berms and significant landscaping along the north and west property lines. In addition, a solid 8' fence has been provided along significant portions of the north property, especially the width of the truck court area to further shield view and noise. These items will provide significantly more site and noise reduction benefits to neighboring uses than

Attachment: MIF Site Noise Narrative (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

what has existed for many, many years at the existing buildings.

Midwest Industrial Funds is one of the largest, privately owned, industrial real estate owners, developers and managers in the Chicago area. We currently have three similar development projects going in Hodgkins, West Chicago and Joliet. In addition, we also own and manage approximately 40 existing buildings with over 90 Tenants.

Sincerely,

Midwest Industrial Funds Inc.

Pat Schaner
Director of Development

MIDWEST
INDUSTRIAL FUNDS

Attachment: MIF Site Noise Narrative (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

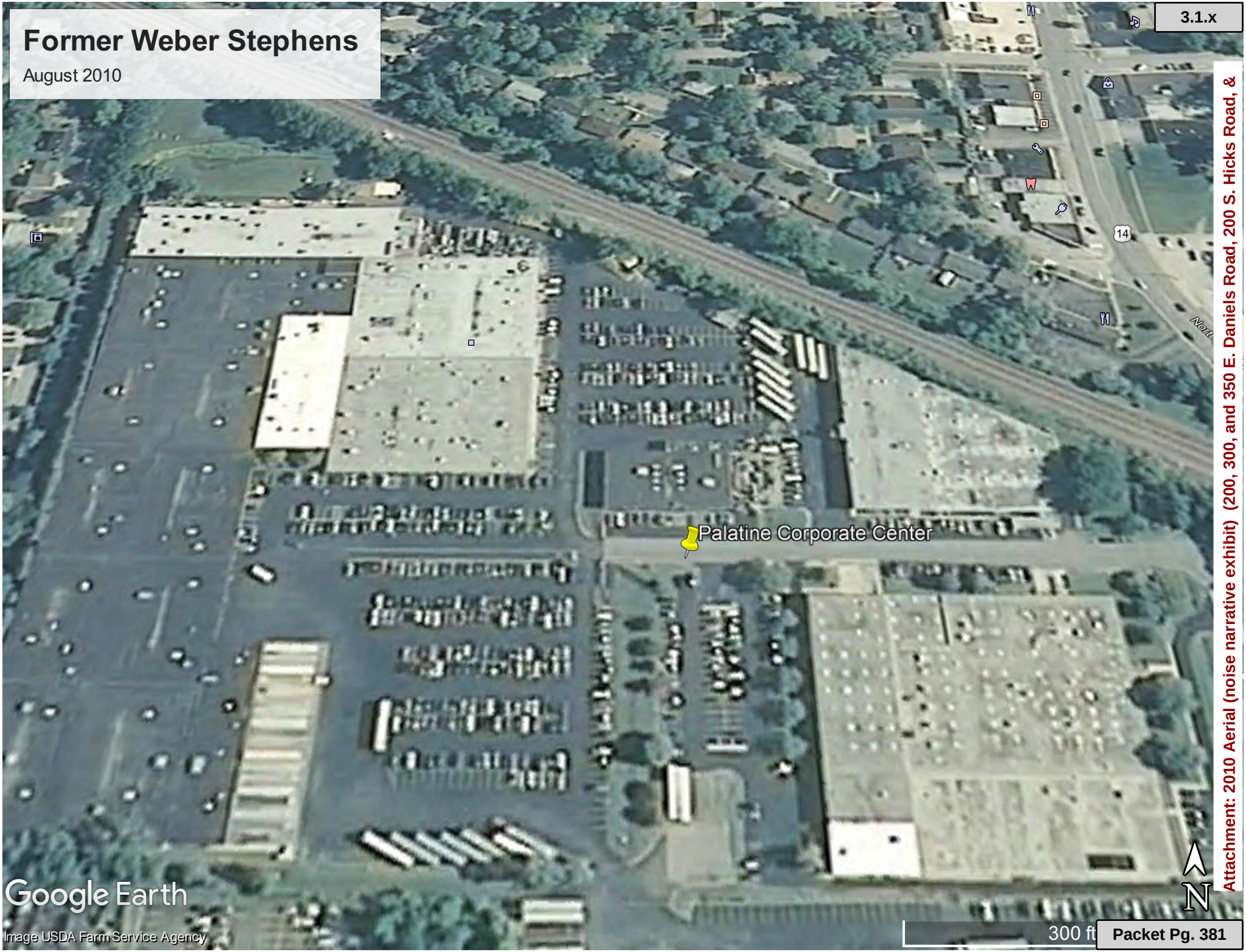
Former Weber Stephens

October 2007

Attachment: 2007 Aerial (noise narrative exhibit) (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, &

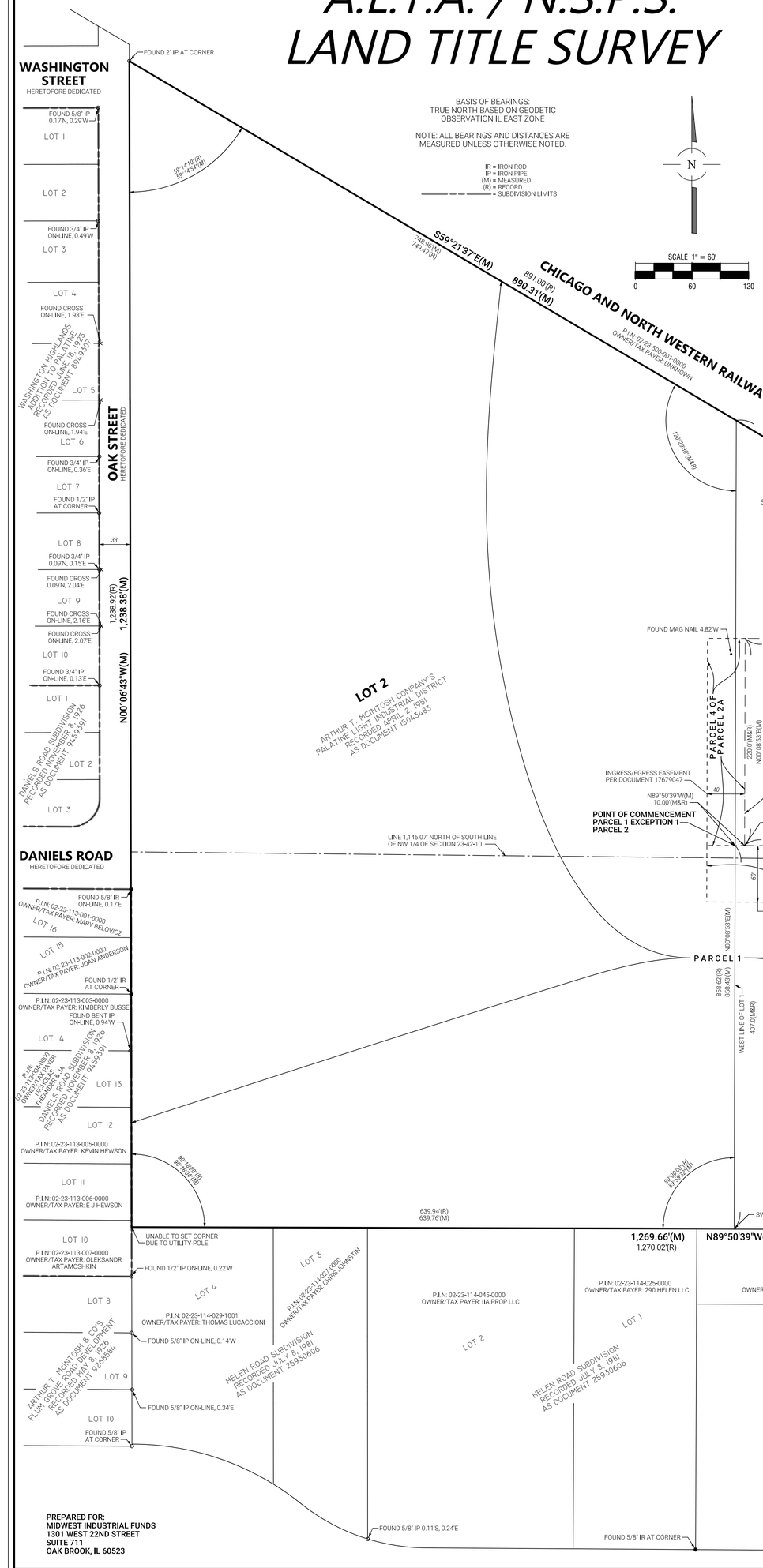
Former Weber Stephens

August 2010



Attachment: 2010 Aerial (noise narrative exhibit) (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, &

A.L.T.A. / N.S.P.S. LAND TITLE SURVEY



PROPERTY DESCRIPTION:

PARCEL 1:

LOTS 1 AND 2 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

EXCEPTING THEREFROM THAT PART OF LOT 1 DESCRIBED AS FOLLOWS:

COMMENCING ON THE WEST LINE THEREOF AND 407.0 FEET NORTH OF THE SOUTH WEST CORNER THEREOF; THENCE EAST AND PARALLEL TO THE SOUTH LINE THEREOF, 10.0 FEET FOR A PLACE OF BEGINNING; THENCE CONTINUING EAST PARALLEL TO THE SOUTH LINE OF SAID LOT 1, 200.08 FEET TO A POINT; THENCE NORTH AND PARALLEL TO THE WEST LINE THEREOF, 99.67 FEET TO A POINT OF CURVE; THENCE NORTHWESTERLY ON A CURVE CONVEX TO THE NORTH EAST HAVING A RADIUS OF 399.27 FEET AN ARC DISTANCE OF 122.23 FEET TO A POINT THAT IS 627.0 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE WEST AND PARALLEL TO THE SOUTH LINE THEREOF, 181.52 FEET TO A POINT THAT IS 10.0 FEET EAST OF THE WEST LINE THEREOF; THENCE SOUTH AND PARALLEL TO SAID WEST LINE, 220.0 FEET TO THE POINT OF BEGINNING, ALL IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

ALSO EXCEPTING THAT PART DESCRIBED AS FOLLOWS:

THAT PART OF THE EAST 316 FEET OF LOT 1 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT (HEREINAFTER REFERRED TO AS "INDUSTRIAL DISTRICT"), BEING A SUBDIVISION OF THE EAST 1/2 OF THE NORTH WEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING NORTH OF A LINE 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1;

ALSO EXCEPTING THAT PART OF SAID LOT 1 DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN SAID LOT 1 WHICH IS 316 FEET WEST OF THE EAST LINE OF SAID LOT 1 AND 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1 AS A PLACE OF BEGINNING; THENCE NORTH A DISTANCE OF 220 FEET; THENCE WEST A DISTANCE OF 84 FEET; THENCE SOUTH A DISTANCE OF 220 FEET; THENCE EAST A DISTANCE OF 84 FEET TO THE PLACE OF BEGINNING;

ALSO EXCEPTING THAT PART DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN SAID LOT 1 WHICH IS 400 FEET WEST OF THE EAST LINE OF SAID LOT 1 AND 407 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE NORTH 220 FEET FOR A PLACE OF BEGINNING; THENCE EAST 84 FEET; THENCE NORTH 60 FEET TO THE NORTH LINE; THENCE NORTHWESTERLY ALONG THE NORTH LINE 90 FEET TO THE WEST LINE; THENCE SOUTH ALONG THE WEST LINE TO THE PLACE OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PARCEL 2:

THAT PART OF LOT 1 DESCRIBED AS FOLLOWS:

COMMENCING ON THE WEST LINE THEREOF AND 407 FEET NORTH OF THE SOUTHWEST CORNER THEREOF; THENCE EAST AND PARALLEL TO THE SOUTH LINE THEREOF, 10 FEET FOR A POINT OF BEGINNING; THENCE CONTINUING EAST PARALLEL TO THE SOUTH LINE OF SAID LOT 1, 200.08 FEET TO A POINT; THENCE NORTH AND PARALLEL TO THE WEST LINE THEREOF, 99.67 FEET TO A POINT OF CURVE; THENCE NORTHWEST ON A CURVE CONVEX TO THE NORTHEAST HAVING A RADIUS OF 399.27 FEET, AN ARC DISTANCE OF 122.23 FEET TO A POINT THAT IS 627.00 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE WEST AND PARALLEL TO THE SOUTH LINE THEREOF, 181.52 FEET TO A POINT THAT IS 10.0 FEET EAST OF THE WEST LINE THEREOF; THENCE SOUTH AND PARALLEL TO SAID WEST LINE 220.0 FEET TO THE POINT OF BEGINNING, ALL IN ARTHUR T. MC INTOSH AND CO'S LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION IN THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS

PARCEL 2A:

A NON-EXCLUSIVE EASEMENT FOR THE BENEFIT OF PARCEL 2 AS CREATED BY THE AGREEMENT RECORDED AS DOCUMENT NUMBER 17679047 FOR THE PURPOSE OF A PRIVATE ROADWAY FOR INGRESS AND EGRESS.

PARCEL 3:

THE EAST 400 FEET OF LOT 1, EXCEPTING THEREFROM THE SOUTH 407.00 FEET THEREOF, IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT, BEING A SUBDIVISION OF THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 23, TOWNSHIP 42 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL 3A:

GRANT OF EASEMENT DATED JULY 9, 1985 AND RECORDED JULY 9, 1985 AS DOCUMENT 85094933 MADE BY ABERDEEN PROPERTIES, INC. TO CHICAGO TITLE AND TRUST COMPANY, A CORPORATION OF ILLINOIS, AS TRUSTEE UNDER TRUST AGREEMENT DATED APRIL 15, 1985 AND KNOWN AS TRUST NUMBER 1087094 AND INDUSTRIAL MOLDED PRODUCTS CO., INC., FOR ROADWAY PURPOSES BY ALL FORMS OF VEHICULAR AND PEDESTRIAN TRAFFIC OVER THE FOLLOWING DESCRIBED PROPERTY:

THAT PART OF LOT 1 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON A LINE 407 FEET NORTH OF THE SOUTH LINE OF LOT 1 AND 400 FEET WEST OF THE EAST LINE; THENCE SOUTH A DISTANCE OF 60 FEET TO A LINE 347 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF LOT 1 IN ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT AFORESAID; THENCE EAST ALONG SAID LAST DESCRIBED LINE A DISTANCE OF 400 FEET; THENCE NORTH 60 FEET TO THE SOUTH EAST CORNER OF PARCEL 1; THENCE WEST ALONG THE SOUTH LINE OF PARCEL 3 A DISTANCE OF 400 FEET TO THE POINT OF BEGINNING.

NOTES:

THIS SURVEY REFLECTS MATTERS OF TITLE AS LISTED ON A COMMITMENT FOR TITLE INSURANCE BY CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO./FILE NO.: CCHI2000465LD WITH AN EFFECTIVE DATE: JANUARY 22, 2020.

AS REQUIRED UNDER THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, EVIDENCE ON OR ABOVE THE SURFACE OF THE SURVEYED PROPERTY OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK, WHICH EVIDENCE MAY INDICATE UTILITIES LOCATED ON, OVER OR BENEATH THE SURVEYED PROPERTY HAS BEEN SHOWN HEREON.

ALL DIMENSIONS ARE IN FEET AND DECIMAL PARTS THEREOF. NO DISTANCES OR ANGLES SHOWN HEREON MAY BE ASSUMED BY SCALING.

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY IN ADDITION TO THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS.

SPACECO, INC IS AN ILLINOIS PROFESSIONAL DESIGN FIRM REGISTERED UNDER LICENSE NUMBER 184-001157.

NO CEMETERIES, GRAVESITE OR BURIAL GROUNDS WERE DISCLOSED IN THE RECORD DOCUMENTS PROVIDED TO THE SURVEYOR OR OBSERVED IN THE PROCESS OF CONDUCTING THIS SURVEY. ADDITIONALLY, THIS SURVEYOR HAS NO PRIOR KNOWLEDGE OF CEMETERIES, GRAVESITE OR BURIAL GROUNDS BEING LOCATED ON THE SURVEYED PROPERTY.

TAX P.I.N.s (PER TAX MAP):
02-23-114-010
02-23-114-021
02-23-114-022
02-23-114-034
02-23-114-035
02-23-114-036
02-23-114-037
02-23-114-038
02-23-114-039

NOTES (CONTINUED):

MONUMENTS WERE FOUND/SET AT THE PARCEL CORNERS AS SHOWN. (TABLE A ITEM 1)

ADDRESS:
200 EAST DANIELS ROAD
PALATINE, IL 60067
(TABLE A ITEM 2)

BASED UPON A REVIEW OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 17031C0181J MAP WITH AN EFFECTIVE DATE/MAP REVISED OF AUGUST 19, 2008, IT IS OUR CONSIDERED OPINION THAT THIS PROPERTY LIES IN ZONE X (UNSHADED) AREA OF MINIMAL FLOOD HAZARD AS IDENTIFIED BY SAID F.I.R.M. MAP. (TABLE A ITEM 3)

PROPERTY SURVEYED CONTAINS 1,105,840 SQUARE FEET, OR 25.387 ACRES, MORE OR LESS. (TABLE A ITEM 4)

SUBSTANTIAL FEATURES ARE SHOWN HEREON. (TABLE A ITEM 8)

NAME OF THE ADJOINERS SHOWN HEREON ARE CURRENT OWNERS AND/OR TAXPAYERS AS LISTED ON THE COOK COUNTY ASSESSOR'S WEBSITE ACCESSED ON APRIL 14, 2020. (TABLE A ITEM 13)

THE DISTANCE TO THE NEAREST INTERSECTION IS APPROXIMATELY 350 FEET SOUTH ON HECK ROAD TO HELLEN ROAD ON THE EAST. THE PROPERTY IS ALSO LOCATED AT THE INTERSECTION OF OAK STREET AND WASHINGTON STREET AND OAK STREET AND DANIELS ROAD ON THE WEST. (TABLE A ITEM 14)

AERIAL PHOTOGRAPHY PRODUCED BY SPACECO, INC. ON MARCH 26, 2020 UTILIZING POST-PROCESSED IMAGES AND ILLINOIS STATE PLANE COORDINATES VIA GNSS REAL TIME NETWORK (RELNET) AND EXCEEDS RECOMMENDED ACCURACIES FOR FEATURE & TOPOGRAPHIC SITE PLANS & SPECS PER FEDERAL GEOGRAPHIC DATA COMMITTEE (FGDC TABLE A-3).

NOTES FROM TITLE COMMITMENT:

A 19. TERMS, PROVISIONS AND CONDITIONS CONTAINED IN GRANT OF EASEMENT AND AGREEMENT RECORDED JULY 9, 1985 AS DOCUMENT 85094933 MADE BY AND BETWEEN ABERDEEN PROPERTIES, INC., CHICAGO TITLE AND TRUST COMPANY, AS TRUSTEE UNDER TRUST AGREEMENT DATED APRIL 15, 1985 AND KNOWN AS TRUST NUMBER 1087094 AND INDUSTRIAL MOLDED PRODUCTS COMPANY INC. FOR ROADWAY PURPOSES BY ALL FORMS OF VEHICULAR AND PEDESTRIAN TRAFFIC.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

B 20. NOTE: THE FOLLOWING ITEM, WHILE APPEARING ON THIS COMMITMENT/POLICY, IS PROVIDED SOLELY FOR YOUR INFORMATION. THE FOLLOWING ENVIRONMENTAL DISCLOSURE DOCUMENT(S) FOR TRANSFER OF REAL PROPERTY APPEAR OF RECORD WHICH INCLUDE A DESCRIPTION OF THE LAND INSURED OR A PART THEREOF: DOCUMENT NUMBER: 90235853 DATE OF RECORDING: MAY 21, 1990
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

C 21. RIGHTS OF THE VILLAGE OF PALATINE AS DISCLOSED BY GRANT DATED APRIL 26, 1948 AND RECORDED JUNE 21, 1948 AS DOCUMENT 14341018 TO ESTABLISH, INSTALL, MAINTAIN, REPAIR AND REPLACE A SEWER MAIN OR MAINS CONNECTED WITH THE SEWER SYSTEM OF THE VILLAGE FOR STORM WATER DRAINAGE, SANITARY SEWERAGE OR BOTH, UNDER THE SURFACE OF THE GROUND, ON AND ACROSS A STRIP OF LAND 10 FEET IN WIDTH ACROSS THE EAST 1/2 OF THE NORTHWEST 1/4, ALSO CONTAINED IN DEED RECORDED AS DOCUMENT 15896718.
(PARCELS 1 AND 3)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON. DOCUMENT 14635020 DESCRIBED WITHIN DOCUMENT 15896718 NOT PROVIDED TO THIS SURVEYOR.)

D 22. 30 FOOT EASEMENT FOR THE VILLAGE OF PALATINE FOR SEWER AND WATER SAID EASEMENT BEING 5 FEET NORTH OF AND 25 FEET SOUTH OF A LINE 1146.07 FEET NORTH OF THE SOUTH LINE OF THE NORTHWEST 1/4, AS DISCLOSED BY DOCUMENT 14635020 AND ALSO CONTAINED IN DEED RECORDED AS DOCUMENT 15896718 FROM ARTHUR T. MC INTOSH AND COMPANY TO ABERDEEN PROPERTIES, INC., A CORPORATION OF ILLINOIS, AND AS SHOWN ON THE PLAT OF SUBDIVISION RECORDED AS DOCUMENT 15043483.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

E 23. A PERPETUAL EASEMENT IN, OVER AND UPON THAT PART OF THE WEST 33 FEET OF LOT 2 IN ARTHUR T. MC INTOSH AND COMPANY'S LIGHT INDUSTRIAL DISTRICT LYING NORTH OF THE SOUTH LINE OF DANIELS ROAD AS EXTENDED EASTERLY FOR THE USE AND BENEFIT OF THE VILLAGE OF PALATINE AND THE PUBLIC FOR STREET, ROAD AND HIGHWAY PURPOSES; ALSO CONTAINED IN DOCUMENT 15896718 RECORDED MAY 4, 1954 FROM ARTHUR T. MC INTOSH AND COMPANY TO ABERDEEN PROPERTIES, INC.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

F 24. COVENANTS, CONDITIONS AND RESTRICTIONS AS ESTABLISHED BY DEED FROM ARTHUR T. MC INTOSH AND COMPANY TO ABERDEEN PROPERTIES, INC. DATED APRIL 28, 1954 AND RECORDED MAY 4, 1954 AS DOCUMENT 15896718 RELATING TO HEIGHT, PARKING FACILITIES AND APPROVAL OF BUILDING PLANS AND SPECIFICATIONS OF BUILDINGS TO BE ERECTED ON THE LAND
NOTE: SAID INSTRUMENT CONTAINS NO PROVISION FOR A FORFEITURE OF OR REVERSION OF TITLE IN CASE OF BREACH OF CONDITION
(AFFECTS ALL)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY BUT IS NOT A PLOTTABLE ITEM.)

G 25. EASEMENT IN, UPON, UNDER AND ALONG THE NORTH 33 FEET OF THE SOUTH 413.92 FEET OF THE LAND TO INSTALL AND MAINTAIN ALL EQUIPMENT FOR THE PURPOSE OF SERVING THE LAND AND OTHER PROPERTY WITH TELEPHONE AND ELECTRIC SERVICE, AS CREATED BY GRANT TO THE COMMONWEALTH EDISON COMPANY AND THE ILLINOIS BELL TELEPHONE COMPANY RECORDED MARCH 10, 1955 AS DOCUMENT 16171139.
(AFFECTS ALL)
(SURVEYORS NOTE: THIS EXCEPTION APPEARS TO AFFECT THE SURVEYED PROPERTY AND IS SHOWN HEREON FROM THE ABOVE DESCRIPTION, DOCUMENT NOT PROVIDED TO THIS SURVEYOR.)

H 26. EASEMENT OVER THE EAST 10 FEET OF THE WEST 20 FEET OF THE FOLLOWING DESCRIBED PROPERTY: BEGINNING ON THE WEST LINE THEREOF AND 377.0 FEET NORTH OF THE SOUTHWEST CORNER THEREOF; THENCE EAST AND PARALLEL TO THE SOUTH LINE THEREOF 210.08 FEET; THENCE NORTH AND PARALLEL TO THE WEST LINE THEREOF 129.67 FEET TO A POINT OF CURVE; THENCE NORTHWESTERLY ON A CURVE CONVEX TO THE NORTHEAST HAVING A RADIUS OF 399.27 FEET AN ARC DISTANCE OF 122.23 FEET TO A POINT THAT IS 627.0 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1; THENCE WEST AND PARALLEL TO THE SOUTH LINE THEREOF 191.52 FEET TO THE WEST LINE OF SAID LOT 1; THENCE SOUTH ALONG THE WEST LINE OF SAID LOT 1, 250 FEET TO THE POINT OF BEGINNING; ALSO THE EAST 9.92 FEET OF THE NORTH 250.0 FEET OF THE SOUTH 627.0 FEET OF LOT 2 TO NORTHERN ILLINOIS GAS COMPANY TO LAY, MAINTAIN, OPERATE, RENEW AND REMOVE A GAS MAIN AND FACILITIES TOGETHER WITH RIGHT OF ACCESS CREATED BY GRANT DATED MAY 24, 1962 AND RECORDED JUNE 28, 1962 AS DOCUMENT 18519112.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

I 27. RIGHT AND EASEMENT TO USE FOR ROADWAY PURPOSES FOR OWNERS AND OCCUPANTS OF LOTS 1 AND 2 IN PALATINE LIGHT INDUSTRIAL DISTRICT SUBDIVISION, THE PRIVATE ROADWAY LOCATED ON A STRIP OF LAND 40 FEET IN WIDTH LYING IMMEDIATELY SOUTH OF AND ADJOINING THAT PART OF THE EAST 316 FEET OF LOT 1, LYING NORTH OF A LINE 397 FEET NORTH OF THE SOUTH LINE OF SAID LOT 1 IN PALATINE LIGHT INDUSTRIAL DISTRICT AS CONTAINED IN DEED IN TRUST RECORDED OCTOBER 8, 1957 AS DOCUMENT 17032756 FROM ABERDEEN PROPERTIES INC., A CORPORATION OF ILLINOIS TO CHICAGO NATIONAL BANK, AS TRUSTEE UNDER TRUST AGREEMENT DATED SEPTEMBER 27, 1957 AND KNOWN AS TRUST NUMBER 14962, PROVIDED THE GRANTEE SHALL NOT CAUSE OR PERMIT THE PARKING OF TRUCKS, VEHICLES OR OTHER CONVEYANCES UPON SAID PRIVATE ROADWAY SO AS TO CAUSE UNREASONABLE BLOCKAGE OR INTERFERENCE WITH THE USE THEREOF AND ALSO CONTAINED IN DEED IN TRUST FROM SAME GRANTOR AND GRANTEE DATED FEBRUARY 28, 1958 AND RECORDED APRIL 1, 1958 AS DOCUMENT 17169812 OF THAT PART OF PRIVATE ROADWAY LOCATED IMMEDIATELY NORTH OF AND ADJOINING THE EAST 248.83 FEET OF THE SOUTH 357 FEET OF LOT 1 IN PALATINE LIGHT INDUSTRIAL DISTRICT.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION APPEARS TO AFFECT THE SURVEYED PROPERTY AND IS SHOWN HEREON FROM DOCUMENT 17032756. DOCUMENT 17169812 NOT PROVIDED TO THIS SURVEYOR, SHOWN HEREON PER THE ABOVE DESCRIPTION.)

J 28. EASEMENT FOR THE RIGHT TO LAY, MAINTAIN, OPERATE, RENEW AND REMOVE A GAS MAIN AND OTHER NECESSARY GAS FACILITIES, DATED OCTOBER 4, 1954 AND RECORDED OCTOBER 14, 1954 AS DOCUMENT 16043246 FROM ABERDEEN PROPERTIES, INC., A CORPORATION OF ILLINOIS TO NORTHERN ILLINOIS GAS COMPANY, A CORPORATION OF ILLINOIS; THE LOCATION OF SAID MAIN IS AS FOLLOWS: 25 FEET SOUTH OF AND PARALLEL WITH A LINE 1146.07 FEET NORTH OF THE SOUTH LINE OF THE NORTHWEST 1/4 OF SECTION 23, AS SHOWN BY BROKEN LINE ON THE PLAT OF SAID SUBDIVISION RECORDED AS DOCUMENT 15043483.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION APPEARS TO AFFECT THE SURVEYED PROPERTY AND IS SHOWN HEREON FROM THE ABOVE DESCRIPTION, DOCUMENT NOT PROVIDED TO THIS SURVEYOR.)

K 29. EASEMENT OVER THE SOUTH 5 FEET OF THE LAND FOR THE PURPOSE OF INSTALLING AND MAINTAINING ALL EQUIPMENT NECESSARY FOR THE PURPOSE OF SERVING THE SUBDIVISION AND OTHER PROPERTY WITH TELEPHONE AND ELECTRIC SERVICE, TOGETHER WITH RIGHT TO OVERHANG AERIAL SERVICE WIRES. TOGETHER WITH RIGHT OF ACCESS THERETO, AS GRANTED TO THE ILLINOIS BELL TELEPHONE COMPANY AND THE COMMONWEALTH EDISON COMPANY AND RECORDED AS DOCUMENT 22188260.
(PARCEL 1)
(SURVEYORS NOTE: THIS EXCEPTION AFFECTS THE SURVEYED PROPERTY AND IS SHOWN HEREON.)

L 30. PRIVATE ROADWAY AND THE COVENANTS AND CONDITIONS THEREIN CONTAINED DISCLOSED BY GRANT OF EASEMENT RECORDED OCTOBER 7, 1959 AS DOCUMENT 17679047 BETWEEN ABERDEEN PROPERTIES INC., AND FIRST NATIONAL BANK OF SKOKIE AS TRUSTEE UNDER TRUST AGREEMENT DATED JULY 10, 1959 AND KNOWN AS TRUST NUMBER 5122 OVER THE FOLLOWING PARTS OF LOTS 1 AND 2 IN PALATINE LIGHT INDUSTRIAL DISTRICT SUBDIVISION AFORESAID:

THAT PORTION OF LOTS 1 AND 2 CONSISTING OF A STRIP OF LAND 60 FEET IN WIDTH EXTENDING FROM THE EAST LINE OF PARCEL 2 AS DESCRIBED IN DOCUMENT 17679047 TO HICKS ROAD IN PALATINE, ILLINOIS, DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF PARCEL 2; THENCE EAST A DISTANCE OF 420 FEET ALONG A LINE 407 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF LOT 1 IN PALATINE LIGHT INDUSTRIAL DISTRICT AFORESAID TO THE EAST LINE OF SAID LOT 1; THENCE SOUTH A DISTANCE OF 60 FEET ALONG THE EAST LINE OF SAID LOT 1; THENCE WEST A DISTANCE OF 420 FEET ALONG A LINE 347 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF SAID LOT 1 TO THE SOUTHEAST CORNER OF PARCEL 3 (AS DESCRIBED IN SAID DOCUMENT 17679047); THENCE NORTH A DISTANCE OF 60 FEET ALONG THE EAST LINE OF PARCEL 3 TO THE POINT OF BEGINNING;

AND OVER THE FOLLOWING DESCRIBED REAL ESTATE DESIGNATED AS PARCEL 3 OF DOCUMENT 17679047: THAT PORTION OF LOTS 1 AND 2 IN PALATINE LIGHT INDUSTRIAL DISTRICT SUBDIVISION AFORESAID CONSISTING OF A STRIP OF LAND 60 FEET IN WIDTH LYING DIRECTLY SOUTH OF AND ADJACENT TO PARCEL 2 OF DOCUMENT 17679047 AND DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF PARCEL 2; THENCE WEST A DISTANCE OF 40 FEET; THENCE SOUTH A DISTANCE OF 60 FEET TO A LINE 347 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF LOT 1 IN SUBDIVISION AFORESAID; THENCE EAST ALONG SAID LAST DESCRIBED LINE A DISTANCE OF 240.906 FEET; THENCE NORTH 60 FEET TO THE SOUTHEAST CORNER OF PARCEL 2; THENCE WEST ALONG THE SOUTH LINE OF PARCEL 2 A DISTANCE OF 200.08 FEET TO THE POINT OF BEGINNING;

AND OVER AND ACROSS THE FOLLOWING DESCRIBED REAL ESTATE DESIGNATED AS PARCEL 4 OF DOCUMENT 17679047: THAT PORTION OF LOTS 1 AND 2 IN PALATINE LIGHT INDUSTRIAL DISTRICT SUBDIVISION AFORESAID CONSISTING OF A STRIP OF LAND 40 FEET IN WIDTH LYING DIRECTLY WEST OF AND ADJACENT TO PARCEL 2 OF DOCUMENT 17679047 AND DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF PARCEL 2; THENCE WEST A DISTANCE OF 40 FEET ALONG THE NORTH LINE OF PARCEL 3 TO THE SOUTHWEST CORNER OF PARCEL 2; THENCE EAST A DISTANCE OF 40 FEET ALONG TH

A.L.T.A. / N.S.P.S. LAND TITLE SURVEY

LEGEND

STORM SEWER	SANITARY MANHOLE	HAND HOLE	BC	BACK OF CURB
SANITARY SEWER	STORM MANHOLE	STREET LIGHT	BCX	BACK OF CURB CORNER
COMBINED SEWER	CATCH BASIN	UTILITY POLE	BX	BUILDING CORNER
WATER MAIN	INLET	TRAFFIC SIGNAL	CB	CATCH BASIN
GAS MAIN	FLARED END SECTION	TRAFFIC SIGNAL BOX	CL	CENTER
ELECTRIC MANHOLE	SPRINKLER HEAD	EC	EDGE OF CONCRETE
UNDERGROUND TELEPHONE LINE	TELEPHONE MANHOLE	BOLLARD	EP	EDGE OF PAVEMENT
UNDERGROUND ELECTRIC LINE	TELEPHONE PEDESTAL	MAILBOX	EPX	EDGE OF PAVEMENT CORNER
UNDERGROUND CATV LINE	ELECTRIC UPRIGHT	SIGN	FNC	FENCE
OVERHEAD WIRE(S) ON UTILITY POLES	CABLE TV UPRIGHT	UNIDENTIFIED MANHOLE	FXCX	FENCE CORNER
FIBER OPTIC LINE	FIRE HYDRANT	RIGHT-OF-WAY MONUMENT	FES	FLARED END SECTION
RAILROAD	VALVE AND VAULT	DISC	LP	LIGHT POLE
FENCE	WATER VALVE	IRON / STEEL ROD	PIV	POST INDICATOR VALVE
GUARDRAIL	B BOX	IRON PIPE	SA	SANITARY MANHOLE
EDGE OF WATER	AUXILARY VALVE	CUT CROSS	ST	STORM MANHOLE
WETLAND LIMITS	WELL	PK / MAG NAIL	UP	UTILITY POLE
	GAS VALVE	RAILROAD SPIKE	UPLP	UTILITY POLE/LIGHT POLE
	UTILITY POLE/LIGHT POLE			ASPHALT
				CONCRETE
				GRAVEL

N

SCALE 1" = 50'

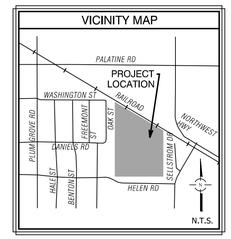
0 50 100

BASIS OF BEARINGS:
TRUE NORTH BASED ON GEODETIC OBSERVATION IL EAST ZONE

NOTE: ALL BEARINGS AND DISTANCES ARE MEASURED UNLESS OTHERWISE NOTED.

IR = IRON ROD
IP = IRON PIPE
(M) = MEASURED
(R) = RECORD
= SUBDIVISION LIMITS

VICINITY MAP



PREPARED FOR:
MIDWEST INDUSTRIAL FUNDS
1301 WEST 22ND STREET
SUITE 711
OAK BROOK, IL 60523

REVISIONS:

SPACESCO INC.

CONSULTING ENGINEERS
SITE DEVELOPMENT ENGINEERS
LAND SURVEYORS

9575 W. Higgins Road, Suite 700,
Rosemont, Illinois 60018
Phone: (847) 696-4060 Fax: (847) 696-4065

DATE: 04/15/2020
JOB NO: 11061
FILENAME: 11061ALTA-01
SHEET 2 OF 3

N:\Projects\11061\SURVEY\11061ALTA-01.dgn SHEET 2 User=blounsbury

Attachment: ALTA Survey (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

A.L.T.A. / N.S.P.S. LAND TITLE SURVEY

LEGEND

STORM SEWER	SANITARY MANHOLE	HAND HOLE	BC	BACK OF CURB
SANITARY SEWER	STORM MANHOLE	STREET LIGHT	BCR	BACK OF CURB CORNER
COMBINED SEWER	CATCH BASIN	UTILITY POLE	BX	BUILDING CORNER
WATER MAIN	INLET	TRAFFIC SIGNAL	CB	CATCH BASIN
GAS MAIN	FLARED END SECTION	TRAFFIC SIGNAL BOX	CL	CENTER
UNDERGROUND TELEPHONE LINE	ELECTRIC MANHOLE	SPRINKLER HEAD	EC	EDGE OF CONCRETE
UNDERGROUND ELECTRIC LINE	TELEPHONE MANHOLE	BOLLARD	EP	EDGE OF PAVEMENT
UNDERGROUND CATV LINE	TELEPHONE UPRIGHT	MAILBOX	EPK	EDGE OF PAVEMENT CORNER
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FENCE	VALVE AND VAULT	DISC	LP	LIGHT POLE
GUARDRAIL	WATER VALVE	IRON / STEEL ROD	SA	SANITARY MANHOLE
EDGE OF WATER	B BOX	IRON PIPE	ST	STORM MANHOLE
WETLAND LIMITS	AUXILARY VALVE	CUT CROSS	UP	UTILITY POLE
	WELL	PK / MAG NAIL	UPLP	UTILITY POLE/LIGHT POLE
	GAS VALVE	RAILROAD SPIKE		ASPHALT
				CONCRETE
				GRAVEL

SCALE 1" = 50'

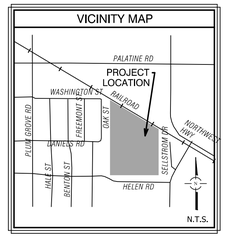
0 50 100

BASIS OF BEARINGS:
TRUE NORTH BASED ON GEODETIC OBSERVATION IL EAST ZONE

NOTE: ALL BEARINGS AND DISTANCES ARE MEASURED UNLESS OTHERWISE NOTED.

SPACECO UAV AERIAL IMAGE
DATE OF FLIGHT: 03-26-2020

VICINITY MAP



WASHINGTON MCINTOSH INDUSTRIAL DISTRICT SUBDIVISION TO PALATINE RECORDED JUNE 10, 1957 AS DOCUMENT 1504787

WASHINGTON STREET
HERETOFORE DEDICATED

OAK STREET
HERETOFORE DEDICATED

DANIELS ROAD
HERETOFORE DEDICATED

HICKS ROAD
HERETOFORE DEDICATED

CHICAGO AND NORTH WESTERN RAILWAY

LOT 1
ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT RECORDED APRIL 2, 1951 AS DOCUMENT 1504483

LOT 2
ARTHUR T. MCINTOSH COMPANY'S PALATINE LIGHT INDUSTRIAL DISTRICT RECORDED APRIL 2, 1951 AS DOCUMENT 1504483

S59°21'37"E(M) 891.00'(R) 890.31'(M)

S59°21'37"E(M) 580.81'(M&R)

N30°38'23"E(M) 15.00'(M&R)

N00°06'43"W(M) 1,238.38'(M) 1,238.92'(R)

S00°08'53"W(M) 505.00'(M&R)

N89°50'39"W(M) 1,269.66'(M) 1,270.02'(R)

LINE 1,146.07' NORTH OF SOUTH LINE OF NW 1/4 OF SECTION 23-42-10

EDGE OF WATER AS OF MARCH 25, 2020

RAILROAD SPUR TRACK, NOT CONNECTED TO MAINLINE

ONE STORY METAL BUILDING

GREASE TRAP

METAL TOWER

ONE STORY BRICK BUILDING

TRENCH GRATE

AUTO SPRINKLER

GAS PIPES & METERS

ELEC BOX

LIFT STATION ELEC BOX

METAL JACK W/ ELEC BOXES

METAL GUARD HOUSE

METAL VAULT

COMMUNICATION/UTILITY BOX

GATE POST

TALL METAL ELEC BOX

GAS METER

BUMP

UNSUBDIVIDED

FOUND 2" IP AT CORNER

FOUND 5/8" IP 0.17'N,0.29'W

FOUND 3/4" IP ON-LINE 0.49'W

FOUND CROSS ON-LINE 1.93'E

FOUND CROSS ON-LINE 1.94'E

FOUND 3/4" IP ON-LINE 0.36'E

FOUND 1/2" IP AT CORNER

FOUND 3/4" IP 0.09'N, 0.15'E

FOUND CROSS 0.09'N, 2.04'E

FOUND CROSS ON-LINE 2.16'E

FOUND CROSS ON-LINE 2.07'E

FOUND 3/4" IP ON-LINE 0.13'E

FOUND 5/8" IP ON-LINE, 0.17'E

FOUND 1/2" IR AT CORNER

FOUND BENT IP ON-LINE, 0.94'W

FOUND 1/2" IP ON-LINE, 0.22'W

FOUND 5/8" IP ON-LINE, 0.14'W

FOUND 5/8" IP AT CORNER

SET IR W/CAP AT CORNER

UNABLE TO SET CORNER DUE TO UTILITY POLE

"NO PARKING"

"STOP"

"SELLSTROM & DANIELS"

"LEFT TURN"

"RESERVED PARKING"

PREPARED FOR:
MIDWEST INDUSTRIAL FUNDS
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SUITE 711
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REVISIONS:

SPACECO INC.

CONSULTING ENGINEERS
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DATE: 04/15/2020
JOB NO: 11061
FILENAME: 11061ALTA-01
SHEET 3 OF 3

N:\Projects\11061\SURVEY\11061ALTA-01.dgn SHEET 3 User=blounsbury

Attachment: ALTA Survey (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)

PALATINE

FINAL PLANNED DEVELOPMENT

Department of Planning & Zoning
200 E. Wood Street · Palatine, IL · 60067-5339
Telephone: (847) 359-9047 · Fax (847) 963-6247
www.palatine.il.us

CONTACT INFORMATION WORKSHEET

PETITIONER(S)	**Business Name (If applicable)**
Midwest Industrial Funds	
Address: 1211 W. 22nd Street, Suite 410	City/State/Zip Code: Oakbrook, IL 60523
Telephone: 630-230-6354	Fax:
Email: pschaner@midwestindustrialfunds.com	
Subject Property Address: 150 S. Sellstrom Dr, 200 S. Sellstrom Dr.	
AUTHORIZED AGENT (if applicable)	**Business Name (if applicable)**
Address	City/State/Zip Code
Telephone	Fax
Email	

RECEIVED
FEB 04 2021
PLANNING DEPARTMENT

I swear that the information contained herein and in any accompanying documents is accurate to the best of my knowledge.

Pat Schaner — Signature

1/29/21 — Date

Attachment: MIF - Final Planned Development application (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD,

PALATINE

FINAL PLANNED DEVELOPMENT

Department of Planning & Zoning
200 E. Wood Street · Palatine, IL · 60067-5339
Telephone: (847) 359-9047 · Fax (847) 963-6247
www.palatine.il.us

Office Use Only		
	Project Planner	Zoning Case #
	Filing Fee	Notification Deadline
	PC Public Hearing Date	Village Council Date

date received

PLEASE TYPE OR PRINT IN INK:

1. Name of Petitioner(s): Midwest Industrial Funds
2. Authorized Agent of Petitioner (if different):

   Name: _____

   Address: _____

   Telephone No. _____ Business No. _____

   Email: _____

   Relationship to Petitioner: _____
3. Property Interest of Petitioner(s): Contract Purchaser
   Owner, Lessee, Contract Purchaser, etc
4. Address of the property for which this application is being filed:
   150 S. Sellstrom Dr, 200 S. Sellstrom Dr.
5. All existing land use(s) on the property are:
6. Current zoning of property: M2 Size of the property: 25.39 acres
7. Briefly describe the proposed Planned Development with regards to types of uses proposed, number and types of units, development mix, amenities to be provided, etc.:

   See Included Narrative

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8. Describe any Variations from the Village Ordinances which would be required if the proposed Planned Development were to be developed as a traditionally zoned project (if any):

See Included Narative

9. The attached Checklist of Documents outlines all required submittals before a project may be scheduled for the required public hearing before the Plan Commission. All required documents must be submitted with this Petition.

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10. The petitioner's signature below indicates that the information contained in this application and on any accompanying documents is true and correct to the best of his/her knowledge.

Signature: Pat Schaner Date: 1/29/21

State of Illinois

County of Cook

This instrument was acknowledged before me on January 29, 2021 by Pat Schaner

CHRISTINE STOECKIG
Official Seal
Notary Public - State of Illinois
My Commission Expires May 16, 2022

Christine Stoeckig
Notary Public

(Seal)

Attachment: MIF - Final Planned Development application (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD,

PALATINE

Real Estate Interest Disclosure Form

Name of Disclosing Party (individual, business, etc.)
Midwest Industrial Funds

Relationship to Petitioner (check one)

☒ Petitioner ☐ Legal Entity holding an Interest (i.e. realtor, attorney, etc.)

☐ Legal Entity Holding a Right of Control (i.e. landlord, etc.)

Address of Disclosing Party	City/State/Zip Code
1211 W. 22nd Street, Suite 410	Oakbrook/IL/60523

Telephone	Fax	Email

Address of Subject Property	**City/State/Zip Code**
[redacted] 150 S. Sellstrom Dr, 200 S. Sellstrom Dr	

Legal Description of Subject Property (see plat of survey or title)
See Plat of Survey

List All Persons Deriving an Interest in Subject Property (i.e. owner, lessee, etc.)

Name	Address	Legal Interest
Midwest Industrial Funds	1211 W. 22nd St, St 410 Oakbrook, IL	– Purchaser
Weber-Stephens Products	1415 S. Roselle Rd, Palatine, IL 60067	– Owner

I affirm that there are no other persons deriving any interest from or through me or from or through any other person or entities above set forth in the property which is the subject of the contract or application for which I am filing this disclosure notice whom I have not disclosed.

I understand that if there are any changes in the interest disclosed in this disclosure notice during the terms of the subject contract or before the Village has taken final action on the matter for which this disclosure notice is filed, I shall file a subsequent disclosure notice disclosing such changes.

Pat Schanz — Signature
1/29/21 — Date

SUBSCRIBED AND SWORN TO before me this 29th day of January 2021.

Christine Stoecking — Notary Public Signature

Project Planner	Zoning Case #

CHRISTINE STOECKIG
Official Seal
Notary Public State of Illinois
My Commission Expires May 16, 2022

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PUBLIC NOTICE

A Public Hearing will be held before the Village of Palatine Plan Commission on Tuesday, March 16, 2021 at 7 PM, in the Village Council Chambers in the Palatine Village Hall, 200 E. Wood Street, relative to a request for the following:

1. Preliminary and Final Plat of Subdivision to permit a 2-lot manufacturing development; and,

2. Vacation of Sellstrom Drive, directly east of the Subject Property (approximately 500 feet); and,

3. Final Planned Development to permit two warehouse/distribution/light assembly/manufacturing (or other manufacturing uses) buildings, with associated office uses; and,

4. Rezoning from Manufacturing to Planned Development.

The property is commonly known as 200 E. Daniels Road, 300 E. Daniels Road, 350 E. Daniels Road, 200 S. Hicks Road, and 1 S. Sellstrom Drive (former Weber Stephen's location).

PIN #s: 02-23-114-010; 02-23-114-021; 02-23-114-022; 02-23-114-034; 02-23-114-035; 02-23-114-036; 02-23-114-037; 02-23-114-038; and 02-23-114-039.

The Petitioner is requesting to subdivide the property into two lots and develop two new warehouse/distribution/light assembly/manufacturing buildings (approximately 275,000 square feet and 153,000 square feet), with associated office uses, in conjunction with the Final Planned Development approval.

The above petition has been filed by Midwest Industrial Funds (Pat Schaner - www.midwestindustrialfunds.com) - is available for examination in the office of the Village Clerk, 200 E. Wood Street.

FILE #: 21-21 VILLAGE OF PALATINE

Dennis Dwyer, Chair, Palatine Plan Commission

DATED: This 1st day of March of 2021

Published in Daily Herald March 1, 2021 (4559424)

CERTIFICATE OF PUBLICATION

Paddock Publications, Inc.

Daily Herald

Corporation organized and existing under and by virtue of the laws of the State of Illinois, DOES HEREBY CERTIFY that it is the publisher of the **DAILY HERALD**. That said **DAILY HERALD** is a secular newspaper and has been circulated daily in the Village(s) of Algonquin,Antioch,Arlington Heights,Aurora,North Aurora,Bannockburn, Barrington,Barrington Hills,Lake Barrington,North Barrington,South Barrington,Bartlett,Batavia,Buffalo Grove,Burlington,Campton Hills, Carpentersville,Cary,Crystal Lake,Deerfield,Deer Park,Des Plaines,Elburn, East Dundee,Elgin,South Elgin,Elk Grove Village,Fox Lake, Fox River Grove,Franklin Park,Geneva,Gilberts,Glenview,Grayslake, Green Oaks,Gurnee,Hainesville,Hampshire,Hanover Park,Hawthorn Woods, Highland Park,Highwood,Hoffman Estates,Huntley,Inverness,Island Lake, Kildeer,Lake Bluff,Lake Forest,Lake in the Hills,Lake Villa,Lake Zurich, Libertyville,Lincolnshire,Lindenhurst,Long Grove,Melrose Park,Montgomery Morton Grove,Mt.Prospect,Mundelein,Niles,Northbrook,Northfield,Northlake Palatine,Park Ridge,Prospect Heights,River Grove,Riverwoods, Rolling Meadows,Rosemont,Round Lake,Round Lake Beach, Round Lake Heights,Round Lake Park,Schaumburg,Schiller Park,Sleepy Holl St. Charles,Streamwood,Sugar Grove,Third Lake,Tower Lakes,Vernon Hills, Volo,Wadsworth,Wauconda,Waukegan,West Dundee,Wheeling,Wildwood, Wilmette

County(ies) of Cook, Kane, Lake, McHenry

and State of Illinois, continuously for more than one year prior to the date of the first publication of the notice hereinafter referred to and is of general circulation throughout said Village(s), County(ies) and State.

I further certify that the DAILY HERALD is a newspaper as defined in "an Act to revise the law in relation to notices" as amended in 1992 Illinois Compiled Statutes, Chapter 715, Act 5, Section 1 and 5. That a notice of which the annexed printed slip is a true copy, was published 03/01/2021 in said DAILY HERALD.

IN WITNESS WHEREOF, the undersigned, the said PADDOCK PUBLICATIONS, Inc., has caused this certificate to be signed by, this authorized agent, at Arlington Heights, Illinois.

PADDOCK PUBLICATIONS, INC.
DAILY HERALD NEWSPAPERS

BY Paula Raetz
Authorized Agent

Control # 4559424

Attachment: Public Notice (200, 300, and 350 E. Daniels Road, 200 S. Hicks Road, & 1 S. Sellstrom Dr. - FPD, PFS, RZ)