ZONING COMMITTEE STAFF REPORT

1. **FILE NAME:** Hawkins Inc. (Barge Channel Rd) **FILE #** 15-018-147
2. **APPLICANT:** Hawkins Chemical **HEARING DATE:** April 2, 2015
3. **TYPE OF APPLICATION:** Conditional Use Permit
4. **LOCATION:** 701 Barge Channel Road
5. **PIN & LEGAL DESCRIPTION:** 092822310010, Registered Land Survey 446 Tract G Of R.l.s. 446 & Part Of Blk 56 Of W St P Real Est & Imp Syn Add No 4 Desc As Fol; In Sw 1/4 Sec 9, T28, R 22 All Incl In A 94, 773 Sq Ft Tract Having 200 Ft Front On Sw Line Of Barge Channel & 97.28 Ft Front On Barge Cha
6. **PLANNING DISTRICT:** 3 **PRESENT ZONING:** I2, FF, RC2
7. **ZONING CODE REFERENCE:** §72.73; §72.74, §61.501
8. **STAFF REPORT DATE:** March 26, 2015 **BY:** Josh Williams
9. **DATE RECEIVED:** March 16, 2015 **60-DAY DEADLINE FOR ACTION:** May 15, 2015

A. **PURPOSE:** Conditional use permit for construction of 8 new tanks and tank containment area, truck containment area and rail containment area structures not elevated on fill in the Flood Fringe District.

B. **PARCEL SIZE:** 94,773 sq. ft. (approx. 2.18 acres)

C. **EXISTING LAND USE:** Industrial (I2, FF, RC2)

D. **SURROUNDING LAND USE:**

North: The Barge Channel, Industrial (I2, FF, RC2)

East: Industrial (I2, FF, RC2)

South: Barge Channel Road, Industrial (I2, FF, RC2)

West: Industrial (I2, FF, RC2)

E. **ZONING CODE CITATION:** §72.73 states that any structure in the FF flood fringe district not elevated on fill requires a conditional use permit; §72.74 lists standards for conditional uses in the FF flood fringe district; §61.501 lists general conditions that must be met by all conditional uses.

F. **HISTORY/DISCUSSION:** A site plan and conditional use permit for the site were approved in 1995.

G. **DISTRICT COUNCIL RECOMMENDATION:** The West Side Citizens Organization (District 3 Council) has not made a recommendation on this application.

H. **FINDINGS:**

1. The applicant is proposing additions to an existing facility located in the Southport Industrial area in the FF flood fringe district. The applicant proposes construction of 8 new tanks, secondary tank containment walls, and rail and train loading and unloading areas with in-ground containment and pipe rack support structures not elevated on fill to the Regulatory Flood Protection Elevation (RFPE).
2. §72.74 lists standards for conditional uses in the FF flood fringe district. Subsections (a) through (d) are applicable to the proposed project:

(a) Alternative elevation methods other than the use of fill may be utilized to elevate a structure's lowest floor above the regulatory flood protection elevation. These alternative methods may include the use of stilts, pilings, parallel walls or above grade, enclosed areas such as crawl spaces or tuck-under garages. The base or floor of an enclosed area shall be considered above grade and not a structure's basement or lowest floor if: 1) the enclosed area is above grade on at least one (1) side of the structure; 2) is designed to internally flood and is constructed with flood-resistant materials; and 3) is used solely for parking of vehicles, building access or storage. The above-noted alternative elevation methods are subject to the following additional standards:

(1) Design and certification. The structure's design and as-built condition must be certified by a registered professional engineer or architect as being in compliance with the general design standards of the Minnesota State Building Code and, specifically, that all

electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities must be at or above the regulatory flood protection elevation or be designed to prevent floodwater from entering or accumulating within these components during times of flooding.

(2) Specific standards for above grade, enclosed areas. Above grade, fully enclosed areas such as crawl spaces or tuck-under garages must be designed to internally flood and the design plans must stipulate:

a. A minimum area of "automatic" openings in the walls where internal flooding is to be used as a floodproofing technique. There shall be a minimum of two (2) openings on at least two (2) sides of the structure and the bottom of all openings shall be no higher than one (1) foot above grade. The automatic openings shall have a minimum net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding unless a registered professional engineer or architect certifies that a smaller net area would suffice. The automatic openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters without any form of intervention.

b. That the enclosed area will be designed of flood-resistant materials in accordance with the FP-3 or FP-4 classifications in the Minnesota State Building Code and shall be used solely for building access, parking of vehicles or storage.

(b) Basements, as defined in §72.14, shall be subject to the following:

(1) Residential basement construction shall not be allowed below the regulatory flood protection elevation except as authorized in subsection (e) of this section.

(2) Nonresidential basements may be allowed below the regulatory flood-protection elevation, provided the basement is protected in accordance with subsection (c) or (e) of this section.

(c) All areas of nonresidential structures including basements to be placed below the regulatory flood protection elevation shall be structurally dry-floodproofed in accordance with the FP-1 or FP-2 floodproofing classifications in the Minnesota State Building Code. This shall require making the structure watertight, with the walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. Structures floodproofed to the FP-3 or FP-4 classification shall not be permitted.

(d) The storage or processing of materials that are, in times of flooding, flammable, explosive or potentially injurious to human, animal or plant life is prohibited. Storage of other materials or equipment may be allowed if readily removable from the area within the time available after a flood warning and in accordance with a plan approved by the planning commission, or if elevated above the regulatory flood protection elevation by alternative methods which meet the requirements of subsection (a) above. Storage of bulk materials may be allowed provided an erosion/sedimentation control plan is submitted which clearly specifies methods to be used to stabilize the materials on site for a regional flood event. The plan must be prepared and certified by a registered professional engineer or other qualified individual acceptable to the planning commission.

(e) When the Federal Emergency Management Agency has issued a letter of map revision-fill (LOMR-F) for vacant parcels of land elevated by fill to the one (1) percent chance flood elevation, the area elevated by fill remains subject to the provisions of this chapter. A structure may be placed on the area elevated by fill with the lowest floor below the regulatory flood protection elevation provided the structure meets the following provisions:

(1) No floor level or portion of a structure that is below the regulatory flood protection elevation shall be used as habitable space or for storage of any property, materials, or equipment that might constitute a safety hazard when contacted by floodwaters. Habitable space shall be defined as any space in a structure used for living, sleeping, eating or cooking. Bathrooms, toilet compartments, closets, halls, storage rooms, laundry

or utility space, and similar areas are not considered habitable space.

(2) For residential and nonresidential structures, the basement floor may be placed below the regulatory flood protection elevation subject to the following standards:

a. The top of the immediate floor above any basement area shall be placed at or above the regulatory flood protection elevation..

b. Any area of the structure placed below the regulatory flood protection elevation shall meet the "reasonably safe from flooding" standards in the Federal Emergency Management Agency (FEMA) publication entitled "Ensuring that Structures Built on Fill In or Near Special Flood Hazard Areas Are Reasonably Safe From Flooding," Technical Bulletin 10-01, a copy of which is hereby adopted by reference and made part of this chapter. In accordance with the provisions of this chapter, and specifically section 72.33(g), the applicant shall submit documentation that the structure is designed and built in accordance with either the "Simplified Approach" or "Engineered Basement Option" found in FEMA Technical Bulletin 10-01.

c. If the ground surrounding the lowest adjacent grade to the structure is not at or above the regulatory flood protection elevation, then any portion of the structure that is below the regulatory flood protection elevation must be floodproofed consistent with any of the FP-1 through FP-4 floodproofing classifications found in the Minnesota State Building Code.

These standards can be met. The applicant is proposing construction of 8 new storage tanks with secondary containment, and new rail and truck loading and unloading facilities with in-ground containment. Secondary tank containment and an Industrial Stormwater Permit are required by the Minnesota Pollution Control Agency (MPCA). Tank containment walls are proposed to be built to Regulatory Flood Protection Elevation (708.4 feet) and constructed to FP-1 or FP-2 floodproofing standards. Tanks and concrete tank pads are also proposed to be constructed to FP-1 or FP-2 floodproofing standards. Rail and truck area containment is in-ground, and proposed to be constructed to FP-1 or FP-2 floodproofing standards. Piping and associated loading and unloading equipment are proposed to be elevated on open structures constructed to FP-1 or FP-2 floodproofing standards. In times of flooding, tanks will be filled with either product or water sufficient to offset buoyancy and sealed, and any electrical equipment below the RFPE removed and utility connections capped. As a condition of approval, the applicant should provide tank, structure, and foundation/pad/pier plans and records of as-built condition signed by a registered professional engineer or architect and verifying consistency with the general design standards of the Minnesota Building Code as referenced in §72.74(a)(1) and construction to FP-1 or FP-2 floodproofing standards. Compliance with the flood response plan on file with the Department of Safety and Inspections should also be a condition of approval.

3. §72.32 lists thirteen (13) factors to be considered in evaluating applications for conditional use permits in the FF flood fringe district:

(a) The relationship of the proposed use to the comprehensive plan and floodplain management program for the city. Subject to meeting the standards listed in §72.74, this proposed use is in compliance with the Saint Paul Comprehensive Plan and the city's floodplain management program. Policy 5.1.3 of the river corridor chapter of the comprehensive plan supports continuation of and additions to industrial uses in the Southport industrial area if said additions will not have significant adverse impacts on air or water quality nor impair river valley views. The proposed additions are in an existing industrial area, and will not significantly alter river valley views. The project will not significantly impact air quality, and subject to compliance with the flood response plan, storm water pollution prevention plan (SWPPP) required as part of site plan approval and on file with the Department of Safety and Inspections, and MPCA Industrial Stormwater Permit, the project will not have a significant adverse impact on water quality. Compliance with the flood response plan, SWPPP, and MPCA Industrial Stormwater Permit should be a condition of approval.

(b) The importance of the services provided by the proposed facility to the community. The

proposed facilities will put vacant industrial land to use. The primary importance of the facility to the community is economic activity and tax base.

(c) *The ability of the existing topography, soils, and geology to support and accommodate the proposed use.* The topography, soils, and geology of the site are similar to those of the general Southport industrial area, and are sufficient to support and accommodate the proposed use.

(d) *The compatibility of the proposed use with existing characteristics of biologic and other natural communities.* The area of the proposed use is industrial in character, and does not contain significant biological communities; impacts of the proposed use will not extend beyond the immediate area.

(e) *The proposed water supply and sanitation systems and the ability of those to prevent disease, contamination, and unsanitary conditions.* The area is already served by adequate water supply and sanitation systems. The proposed addition will not create significant additional demand for water supply or sanitation capability.

(f) *The requirements of the facility for a river-dependent location, if applicable.* The purpose of the facility is for transfer of materials from barges, and is therefore dependent on a river location.

(g) *The safety of access to the property for ordinary vehicles.* Safe access to the site is available by private road accessed via Barge Channel Road.

(h) *The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.* All structures, including tanks, will be constructed to FP-1 or FP-2 floodproofing standards, and any electrical equipment will be removed in times of flooding. Tanks will be filled with product or water in times of flooding to neutralize any buoyancy forces.

(i) *The dangers to life and property due to increased flood heights or velocities caused by encroachments.* The proposed encroachments are of limited footprint and located in the flood fringe where impacts on flood flows are negligible.

(j) *The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site.* The proposed facility is located in the flood fringe, where the velocity of flood flow and sediment transport is generally minimal. The 100-year flood height elevation for the site is 706.4 feet.

(k) *The danger that materials may be swept onto other lands or downstream to the injury of others.* The proposed facility will be located in the flood fringe, where water velocities are generally minimal. All structures will be constructed to FP-1 or FP-2 floodproofing standards. Secondary containment around the tanks would minimize drift in the unlikely event of tank detachment from pads.

(l) *The availability of alternative locations or configurations for the proposed use.* Operations at the subject site involve transfer from barges to trains and trucks. Elevation on fill of the entire site would not be feasible, and would result in practical difficulties for intermodal transfer operations.

(m) *Such other factors as are relevant to the purposes of this chapter.* The factors and findings enumerated and described herein adequately evaluate the proposed use for the purposes of this chapter.

4. §61.501 lists five standards that all conditional uses must satisfy:

(a) *The extent, location and intensity of the use will be in substantial compliance with the Saint Paul Comprehensive Plan and any applicable subarea plans which were approved by the city council.* This condition is met. Subject to meeting the standards listed in §72.74, this proposed use is in compliance with the Saint Paul Comprehensive Plan. Policy 5.1.3 of the river corridor chapter of the comprehensive plan supports continuation of and additions to industrial uses in the Southport industrial area if said additions will not have significant adverse impacts on air or water quality nor impair river valley views. The proposed additions are in an existing

industrial area, and will not significantly alter river valley views. The project will not significantly impact air quality, and subject to the requirements of the flood response plan, SWPPP, and terms of the MPCA Industrial Stormwater Permit, the project will not have a significant adverse impact on water quality. Compliance with the flood response plan, SWPPP, and MPCA Industrial Stormwater Permit should be a condition of approval.

(b) *The use will provide adequate ingress and egress to minimize traffic congestion in the public streets.* This condition is met. The proposed facility will be served by a private road accessed via Barge Channel Road. During site plan review, Saint Paul Public Works staff did not identify any adverse impacts associated with increased truck traffic on Barge Channel Road.

(c) *The use will not be detrimental to the existing character of the development in the immediate neighborhood or endanger the public health, safety and general welfare.* This condition is met. The proposed facility is consistent with the existing industrial character of the immediate neighborhood.

(d) *The use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.* This condition is met. The use is industrial in nature, and will not impede improvement of surrounding properties for allowed uses.

(e) *The use shall, in all other respects, conform to the applicable regulations of the district in which it is located.* This condition can be met. Subject to compliance with the flood response plan, SWPPP and MPCA Industrial Stormwater Permit, the use conforms to all applicable regulations of the I2 general industrial district, RC2 river corridor district, and the FF flood fringe district. Compliance with the flood response plan, SWPPP, and MPCA Industrial Stormwater Permit should be a condition of approval.

I. **STAFF RECOMMENDATION:** Based on the above findings, staff recommends approval of the conditional use permit for equipment pits below the regulatory flood protection elevation and motor control center elevated using an alternative to fill, subject to the following additional condition(s):

1. The applicant shall provide plans and record of as-built condition for all structures signed by a registered professional engineer or architect and verifying consistency with the general design standards of the Minnesota State Building Code and construction to FP-1 or FP-2 floodproofing standards.
2. The applicant shall adhere to all provisions of the flood response plan and SWPPP on file with the Department of Safety and Inspections.
3. The applicant shall be in compliance with the terms of the MPCA Industrial Stormwater Permit for the site.

CONDITIONAL USE PERMIT APPLICATION

Department of Planning and Economic Development
Zoning Section
1400 City Hall Annex
25 West Fourth Street
Saint Paul, MN 55102-1634
(651) 266-6589

Zoning office use only
File # 15-018147
Fee:
Tentative Hearing Date: 4-2-15

PD = 3

092822310010

APPLICANT

Name Hawkins, Inc.
Address 2381 Rosegate
City Roseville St. MN Zip 55113 Daytime Phone 612-617-8595
Name of Owner (if different)
Contact Person (if different) Drew Scott Phone 612-617-8595

PROPERTY LOCATION

Address / Location 701 Barge Channel Rd. St Paul, MN 55107
Legal Description See Attached.
Current Zoning I2
(attach additional sheet if necessary)

TYPE OF PERMIT: Application is hereby made for a Conditional Use Permit under provisions of Chapter 72, Section 73, Paragraph —— of the Zoning Code.

SUPPORTING INFORMATION: Explain how the use will meet all of the applicable standards and conditions. If you are requesting modification of any special conditions or standards for a conditional use, explain why the modification is needed and how it meets the requirements for modification of special conditions in Section 61.502 of the Zoning Code. Attach additional sheets if necessary.

See Attached letter from Larson Engineering dated 3/9/15.

☒ Required site plan is attached

Applicant's Signature [signature] Date 3/9/15 City Agent pdd 3-12-15

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Larson Engineering, Inc.
3524 Labore Road
White Bear Lake, MN 55110-5126
651.481.9120 Fax: 651.481.9201
www.larsonengr.com

Larson

March 9, 2015

Department of Planning and Economic Development
City of St. Paul – Zoning Section
1400 City Hall Annex
25 West Fourth Street
St. Paul, MN 55102-1634

Re: Conditional Use Permit Application – Supporting Information
Facility Development
Hawkins, Inc. – BP 12 Terminal 2
701 Barge Channel Road, St. Paul, MN 55107

The aforementioned project lies within the FF Flood Fringe District and requires a Conditional Use Permit (CUP) due to the proposed placement of certain structures.. Larson Engineering, Inc. has designed the facility with flood proofing provisions in accordance with Minnesota Building Code to the designated flood elevation of 706.40. The following is a brief description design considerations and efforts taken:

There are three main areas for the proposed construction. Each area is designed to work in unison with the others and is restrained by site specific conditions such as soils, rail elevations, road elevations, and available space. It would be impractical and contrary to good engineering practice to elevate these structures above the proposed elevations. Additionally, all areas are designed to contain a minimum of 110% of the largest container in compliance with MPCA spill guidelines. There will be no net loss of available flood plain storage as result of this project.

Tank Containment Area – This area consists of (8) tank structures and concrete containment. The tank base elevation is located at 701.00. Reinforced concrete spill containment walls completely surround the tank area and extend to an elevation of 707.00 from the pad elevation of 700.00 to 700.75. The walls are designed to capture and contain any potential spill as well as withstand external hydraulic pressures from flood waters. The containment walls will be fixed to the foundation mat which support the tanks over the existing subgrade soils. The tanks will be anchored to the pads to prevent buoyancy in the event flood waters top containment walls.

Truck Containment Area – This area consists of a covered steel structure with an access platform, concrete containment, and (2) truck scales for loading/unloading operations. The truck driving surface is at an elevation of 703 with depressed containment below the transfer area. The structure has openings on each end in compliance with Sec 72.72 Paragraph 2. All proposed construction materials below the flood elevations would withstand negligible damage with any prolonged flooding episode. All electrical/equipment located below the flood elevation is low voltage and would be removed in a flood event. .

Rail Containment Area – This area consists of (2) rail spurs, an access platform, pipe rack, and concrete containment. The proposed rail spurs will be set at an elevation 703.00 with depressed containment. There will be a steel access platform and pipe rack structure. All piping and electrical will be elevated above the flood elevation. The entire area is designed to flood throughout.

In Summary, we believe this design is consistent with requirements of the Minnesota Building Code and Conditional Use Permit standards. Please let us know if, upon review, additional information is required.

Sincerely,
Larson Engineering, Inc.

Michael A. Murphy, P.E., LEED AP
Civil Project Manager

Douglas R Hughes, P.E
Structural Project Manager

Cc:
Hawkins, Inc. – Drew Scott, Project Engineer

Larson Engineering, Inc.
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Larson

March 9, 2015

Department of Planning and Economic Development
City of St. Paul – Zoning Section
1400 City Hall Annex
25 West Fourth Street
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Tank Containment Area – This area consists of (8) tank structures and concrete containment. The tank base elevation is located at 701.00. Reinforced concrete spill containment walls completely surround the tank area and extend to an elevation of 707.00 from the pad elevation of 700.00 to 700.75. The walls are designed to capture and contain any potential spill as well as withstand external hydraulic pressures from flood waters. The containment walls will be fixed to the foundation mat which support the tanks over the existing subgrade soils. The tanks will be anchored to the pads to prevent buoyancy in the event flood waters top containment walls.

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Cc:
Hawkins, Inc. – Drew Scott, Project Engineer

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March 18, 2015

Department of Planning and Economic Development
City of St. Paul – Zoning Section
1400 City Hall Annex
25 West Fourth Street
St. Paul, MN 55102-1634

Re: Conditional Use Permit Application – Supplemental Information
Facility Development
Hawkins, Inc. – BP 12 Terminal 2
701 Barge Channel Road, St. Paul, MN 55107

To whom it may concern:

The intent of this letter is to provide additional information and be a supplement to Larson Engineering's original letter dated March 9, 2015, regarding the design of the new Tank Containment Walls.

Larson Engineering has revised the concrete walls for a Baseline Flood Elevation (BFE) of 706.4' and a Regulatory Flood Protection Elevation (RFPE) of 708.4'. The top of the new wall will be at 708.5'. The walls were designed per ASCE 24-05 Standard "Flood Resistant Design and Construction" and applicable static, dynamic, and impact forces.

The new walls are designed to meet the wet flood proof Standard FP-1 and the elevations are shown on the attached drawings S4.0 and S5.0.

Please call if you have any further questions regarding the containment walls.

Sincerely,
Larson Engineering, Inc.

Michael A. Murphy, P.E., LEED AP
Civil Project Manager

Douglas R. Hughes, P.E
Structural Project Manager

Cc:
Hawkins, Inc. – Drew Scott, Project Engineer

FLOOD RESPONSE PLAN

Revised 4/3/15

Hawkins, Inc. – Terminal 2
701 Barge Channel Rd. St Paul, MN 55107
(612) 331-6910

Facility Contact

Kevin O'Rourke
St Paul Plant Manager
D. (612) 617-8641 M. (612) 968-5079
kevin.orourke@hawkinsinc.com

Flood Plan Overview

Hawkins Inc. is aware that the location above may be subject to flooding based upon the current flood plain and dynamics of the river system. In order to prepare for a flood we take the following measures:

- Based on weather, a regular check is made of the NOAA's National Weather Service Forecast Office, Twin Cities, MN for any flood forecast:
  - http://www.crh.noaa.gov/mpx/
- Specifically, we use the USGS gauge located at the Robert St Bridge in St Paul, MN. This gauge is the closest to our facility and provides the most applicable indication of water levels affecting our facility.
  - http://water.weather.gov/ahps2/hydrograph.php?wfo=mpx&prob_type=stage&gage=stpm5
- Hawkins, Inc. is on the email list maintained by the City of St. Paul Operations Center for contact in case of flood forecast. The Saint Paul Department of Emergency Management is responsible for coordination of the City's response to emergency situations and disasters such as flooding, and coordinates response between the city and industry. Information on flood events can be found below:
  - http://www.stpaul.gov/index.aspx?NID=3742

The following activities summarize our preparation and action levels. It is important to note that the nature of such an event will be variable in timing, intensity, and duration. We will closely monitor water levels and predictions and work with authorities throughout the process. Specifics within any given flood event may necessitate an alteration in our preparation activities or action levels.

Flood Preparation

4 weeks before predicted flooding:

- Begin to manufacture and stock future specialty blends and moving excess material off site

3 weeks before predicted flooding:

- Begin to contact suppliers for product during flood
- Setup temporary storage of materials off-site
- Buy sand bags and poly for dike walls
- Order clay material for dike walls.
- Order diesel generator and dewatering pumps.

2 weeks before predicted flooding

- Ensure that affected tanks are either filled with enough material to ensure that:

- They are at product levels that will make them heavier than flotation forces based on the expected flood levels
- Or alternatively empty the tanks that will need to be filled with water

- Start filling sand bags
- Start emptying warehouse of non-essential material

1 week before predicted flooding

- Fill empty tanks with water if necessary
- Start to pull pump motors for unneeded pumps
- Build dike walls, leaving gap for traffic
- Dike storm drains.
- Rent portable toilets for flood watch personnel

2-3 days before predicted flooding

- Install diesel generator and dewatering pumps.
- Remove everything from office area
- Finish removing items from warehouse
- Shut down boilers

1 day before predicted flooding

- Remove all unnecessary personnel
- Close gap in dike wall
- Begin Flood Watch of site.

Flood Action Levels and Key Elevations

River Stage	Water Elevation	Area Impact	Hawkins Actions(s)
10'	693.77'	Initial Action Level	Initiate flood preparation activities as necessary
14'	697.77'	Minor Flood Stage	Inspect facility, Remove debris, Monitor levels / predictions
17'	700.77'	Major Flood Stage	Prepare diking, electrical removal, sanitary closure
20'	703.77'	Water at Facility	Prepare facility closure, monitor facility as needed

Key Elevations

River Stage	Water Elevation	Facility Impact Levels
18'	701.77'	Barge Channel Road begins to flood. Vehicle passage may be affected.
20'	703.77'	Water begins to enter the site near the road. No facility structures are impacted.
21'	704.77'	Water begins to top the dock wall and approaches rail and truck transfer areas
22'	705.77'	Water enters rail and truck areas and approaches existing office building.

Historic crests are listed on the NWS website. River stage data is taken from the Robert Street Bridge USGS gauge using NAVD88 datum. Previous preparation efforts are found on the Hawkins Operations shared drive.

SYMBOL LEGEND

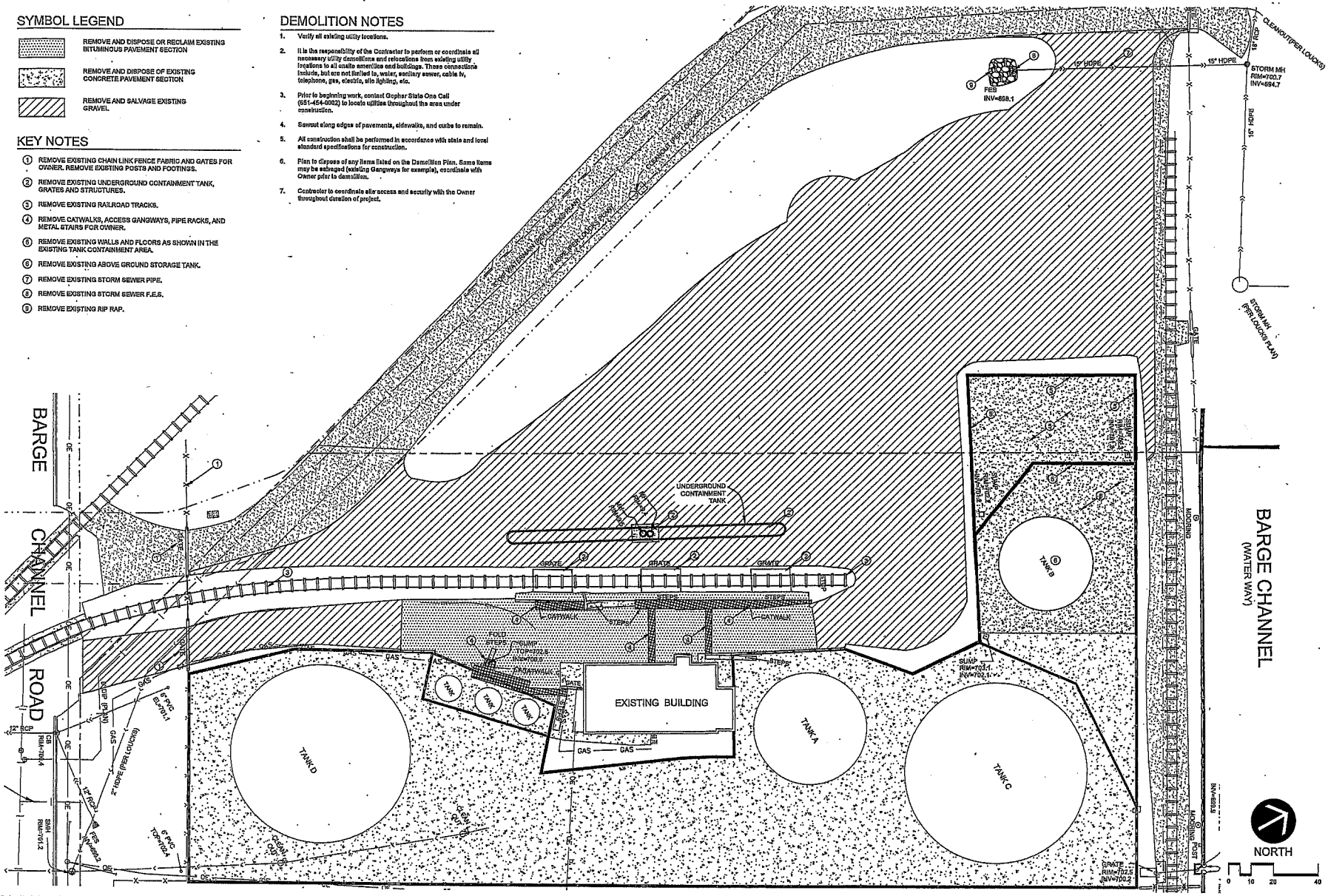
- REMOVE AND DISPOSE OR RECLAIM EXISTING BITUMINOUS PAVEMENT SECTION
- REMOVE AND DISPOSE OF EXISTING CONCRETE PAVEMENT SECTION
- REMOVE AND SALVAGE EXISTING GRAVEL

KEY NOTES

1. REMOVE EXISTING CHAIN LINK FENCE FABRIC AND GATES FOR OWNER. REMOVE EXISTING POSTS AND FOOTINGS.
2. REMOVE EXISTING UNDERGROUND CONTAINMENT TANK, GRATES AND STRUCTURES.
3. REMOVE EXISTING RAILROAD TRACKS.
4. REMOVE CATWALKS, ACCESS GANGWAYS, PIPE RACKS, AND METAL STAIRS FOR OWNER.
5. REMOVE EXISTING WALLS AND FLOORS AS SHOWN IN THE EXISTING TANK CONTAINMENT AREA.
6. REMOVE EXISTING ABOVE GROUND STORAGE TANK.
7. REMOVE EXISTING STORM SEWER PIPE.
8. REMOVE EXISTING STORM SEWER F.E.S.
9. REMOVE EXISTING RIP RAP.

DEMOLITION NOTES

1. Verify all existing utility locations.
2. It is the responsibility of the Contractor to perform or coordinate all necessary utility demolitions and relocations from existing utility locations to all onsite amenities and buildings. These connections include, but are not limited to, water, sanitary sewer, cable tv, telephone, gas, electric, site lighting, etc.
3. Prior to beginning work, contact Gopher State One Call (651-454-0002) to locate utilities throughout the area under construction.
4. Sawcut along edges of pavements, sidewalks, and curbs to remain.
5. All construction shall be performed in accordance with state and local standard specifications for construction.
6. Plan to dispose of any items listed on the Demolition Plan. Some items may be salvaged (existing Gangways for example), coordinate with Owner prior to demolition.
7. Contractor to coordinate site access and security with the Owner throughout duration of project.



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Larson Engineering, Inc.
1001 Office Park Road, Ste 214
West Des Moines, IA 50265
515.223.4377
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Client:
HAWKINS, INC.
3100 EAST HENNEPIN AVENUE
MINNEAPOLIS, MN 55413

Project Title:
FACILITY EXPANSION
HAWKINS, INC - BP 1 TERMINAL 2
CONFIDENTIAL

I hereby certify that this plan, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the state of Minnesota.

Michael A. Murphy, P.E.
Date: 03.02.16 Reg. No.: 42806

Rev.	Date	Description

Project #: 12146116
Drawn By: APP
Checked By: MAM
Issue Date: 03.02.16

Sheet Title:
DEMOLITION PLAN

C1

Sheet: 1 of 6

SYMBOL LEGEND

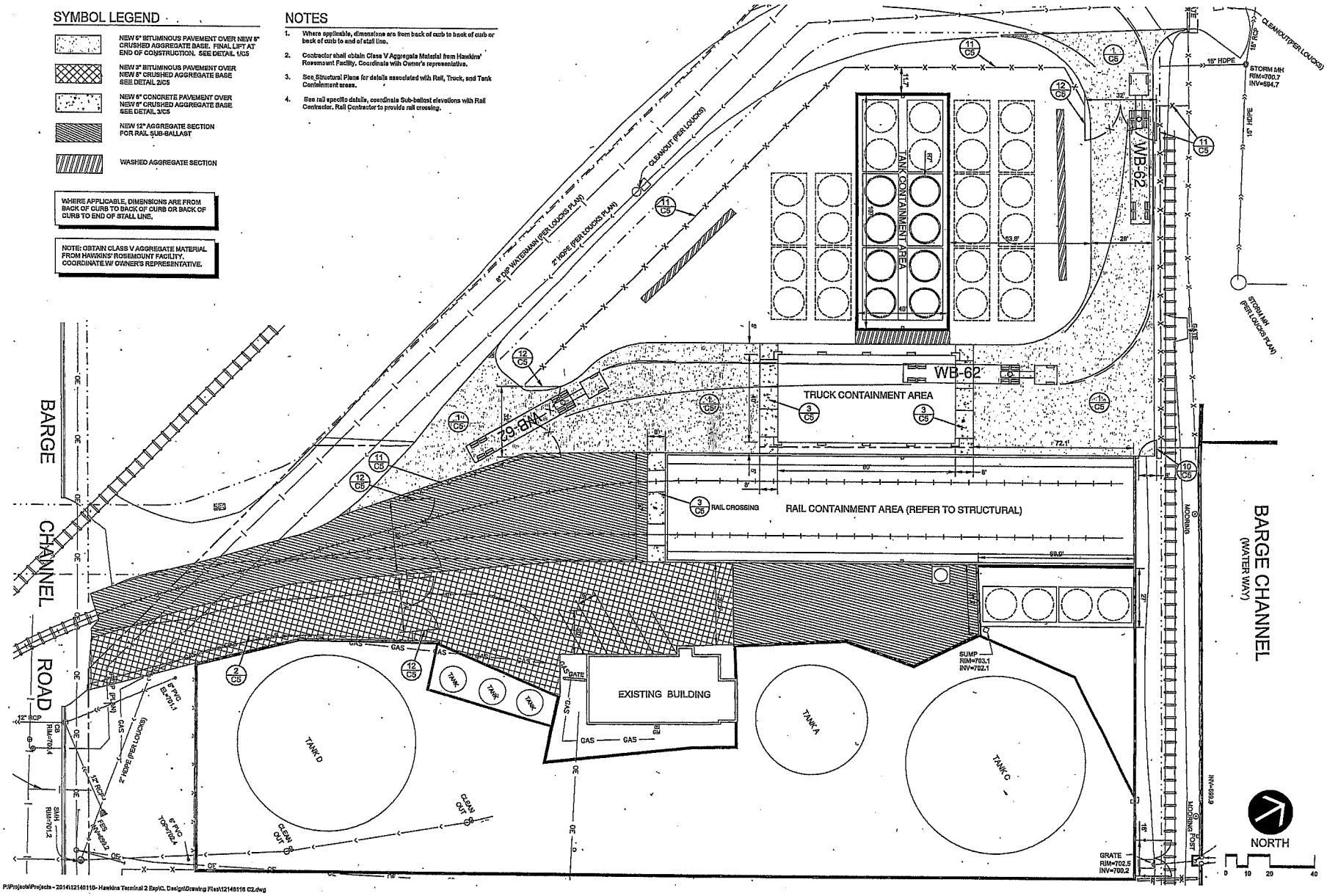
- NEW 6" BITUMINOUS PAVEMENT OVER NEW 8" CRUSHED AGGREGATE BASE. FINAL LIFT AT END OF CONSTRUCTION. SEE DETAIL 1/C5
- NEW 3" BITUMINOUS PAVEMENT OVER NEW 8" CRUSHED AGGREGATE BASE SEE DETAIL 2/C5
- NEW 6" CONCRETE PAVEMENT OVER NEW 6" CRUSHED AGGREGATE BASE SEE DETAIL 3/C5
- NEW 12" AGGREGATE SECTION FOR RAIL SUB-BALLAST
- WASHED AGGREGATE SECTION

WHERE APPLICABLE, DIMENSIONS ARE FROM BACK OF CURB TO BACK OF CURB OR BACK OF CURB TO END OF STALL LINE.

NOTE: OBTAIN CLASS V AGGREGATE MATERIAL FROM HAWKINS' ROSEMOUNT FACILITY. COORDINATE W/ OWNER'S REPRESENTATIVE.

NOTES

1. Where applicable, dimensions are from back of curb to back of curb or back of curb to end of stall line.
2. Contractor shall obtain Class V Aggregate Material from Hawkins' Rosemount Facility. Coordinate with Owner's representative.
3. See Structural Plans for details associated with Rail, Truck, and Tank Containment areas.
4. See rail specific details, coordinate Sub-ballast elevations with Rail Contractor. Rail Contractor to provide rail crossing.



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MINNEAPOLIS, MN 55413

Project Title:
FACILITY EXPANSION
HAWKINS, INC - BP 1 TERMINAL 2

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Michael A. Murphy, P.E.
Date: 03.02.15 Reg. No.: 42808

Rev.	Date	Description

Project #: 12146116
Drawn By: APP
Checked By: MAM
Issue Date: 03.02.15
Sheet Title:

PAVING AND DIMENSION PLAN

C2

Sheet: 2 of 6

GRADING NOTES

1. All elevations with an asterisk (*) shall be field verified. If elevations vary significantly, notify the Engineer for further instructions.
2. Grades shown in paved areas represent finish elevation.
3. Restore all disturbed areas with 4" of good quality topsoil and seed.
4. All construction shall be performed in accordance with state and local standard specifications for construction.

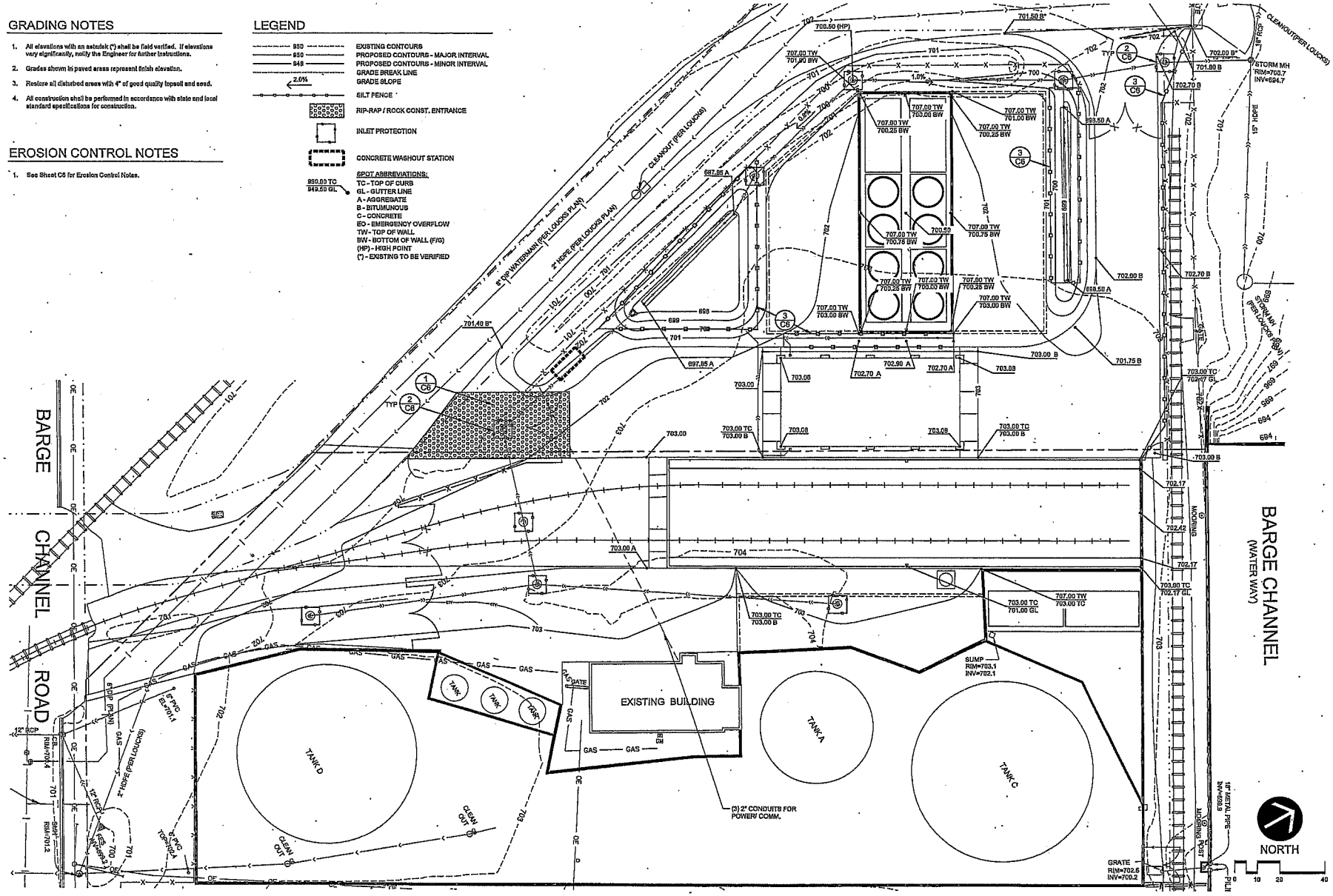
EROSION CONTROL NOTES

1. See Sheet C6 for Erosion Control Notes.

LEGEND

- 850 — EXISTING CONTOURS
- 850 — PROPOSED CONTOURS - MAJOR INTERVAL
- 849 — PROPOSED CONTOURS - MINOR INTERVAL
- GRADE BREAK LINE
- 2.0% GRADE SLOPE
- SILT FENCE
- RIP-RAP / ROCK CONST. ENTRANCE
- INLET PROTECTION
- CONCRETE WASHOUT STATION
- 850.00 TC / 849.50 GL

SPOT ABBREVIATIONS:
TC - TOP OF CURB
GL - GUTTER LINE
A - AGGREGATE
B - BITUMINOUS
C - CONCRETE
EO - EMERGENCY OVERFLOW
TW - TOP OF WALL
BW - BOTTOM OF WALL (F/G)
(HP) - HIGH POINT
(*) - EXISTING TO BE VERIFIED



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HAWKINS, INC - BP 1 TERMINAL 2

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Michael A. Murphy, P.E.
Date: 03.02.15 Reg. No.: 42808

Rev.	Date	Description

Project #: 12146116
Drawn By: APP
Checked By: MAM
Issue Date: 03.02.15

Sheet Title:
GRADING AND EROSION CONTROL PLAN

C3

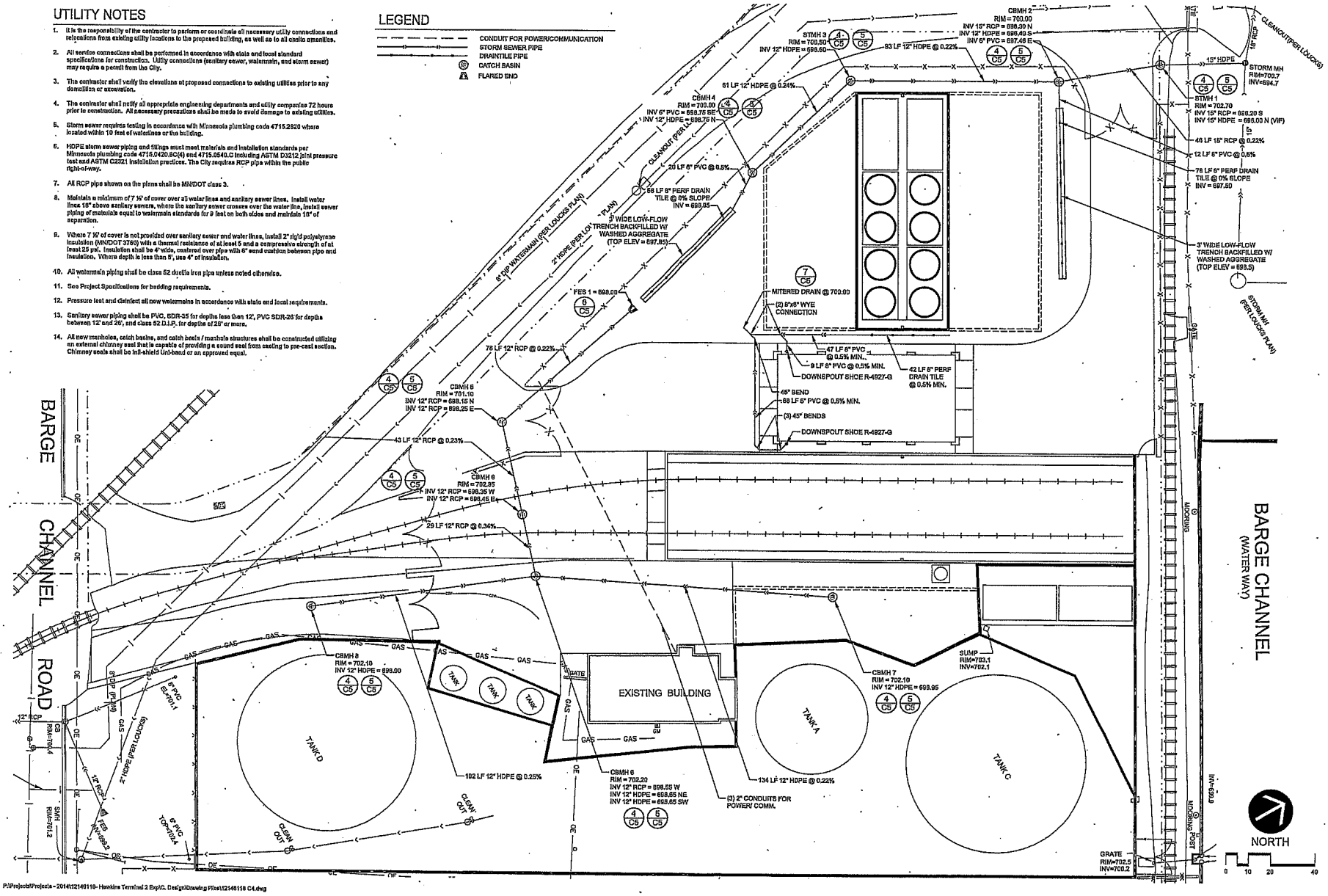
Sheet: 3 of 8

UTILITY NOTES

1. It is the responsibility of the contractor to perform or coordinate all necessary utility connections and relocations from existing utility locations to the proposed building, as well as to all onsite amenities.
2. All service connections shall be performed in accordance with state and local standard specifications for construction. Utility connections (sanitary sewer, watermain, and storm sewer) may require a permit from the City.
3. The contractor shall verify the elevations at proposed connections to existing utilities prior to any demolition or excavation.
4. The contractor shall notify all appropriate engineering departments and utility companies 72 hours prior to construction. All necessary precautions shall be made to avoid damage to existing utilities.
5. Storm sewer requires testing in accordance with Minnesota plumbing code 4715.2920 where located within 10 feet of waterlines or the building.
6. HDPE storm sewer piping and fittings must meet materials and installation standards per Minnesota plumbing code 4715.0420.6C(4) and 4715.0540.C including ASTM D3212 joint pressure test and ASTM C2321 installation practices. The City requires RCP pipe within the public right-of-way.
7. All RCP pipe shown on the plans shall be MN/DOT class 3.
8. Maintain a minimum of 7 ½' of cover over all water lines and sanitary sewer lines. Install water lines 18" above sanitary sewers, where the sanitary sewer crosses over the water line, install sewer piping of materials equal to watermain standards for 9 feet on both sides and maintain 18" of separation.
9. Where 7 ½' of cover is not provided over sanitary sewer and water lines, install 2" rigid polystyrene insulation (MN/DOT 3760) with a thermal resistance of at least 5 and a compressive strength of at least 25 psi. Insulation shall be 4' wide, centered over pipe with 6" sand cushion between pipe and insulation. Where depth is less than 5', use 4" of insulation.
10. All watermain piping shall be class 52 ductile iron pipe unless noted otherwise.
11. See Project Specifications for bedding requirements.
12. Pressure test and disinfect all new watermains in accordance with state and local requirements.
13. Sanitary sewer piping shall be PVC, SDR-35 for depths less than 12', PVC SDR-26 for depths between 12' and 26', and class 52 D.I.P. for depths of 26' or more.
14. All new manholes, catch basins, and catch basin / manhole structures shall be constructed utilizing an external chimney seal that is capable of providing a sound seal from casting to pre-cast section. Chimney seals shall be link-shield Uni-band or an approved equal.

LEGEND

- CONDUIT FOR POWER/COMMUNICATION
- STORM SEWER PIPE
- DRAINTILE PIPE
- CATCH BASIN
- FLARED END



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Project Title: FACILITY EXPANSION
HAWKINS, INC - BP 1 TERMINAL 2

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Michael A. Murphy, P.E.
Date: 03.02.15 Reg. No.: 42808

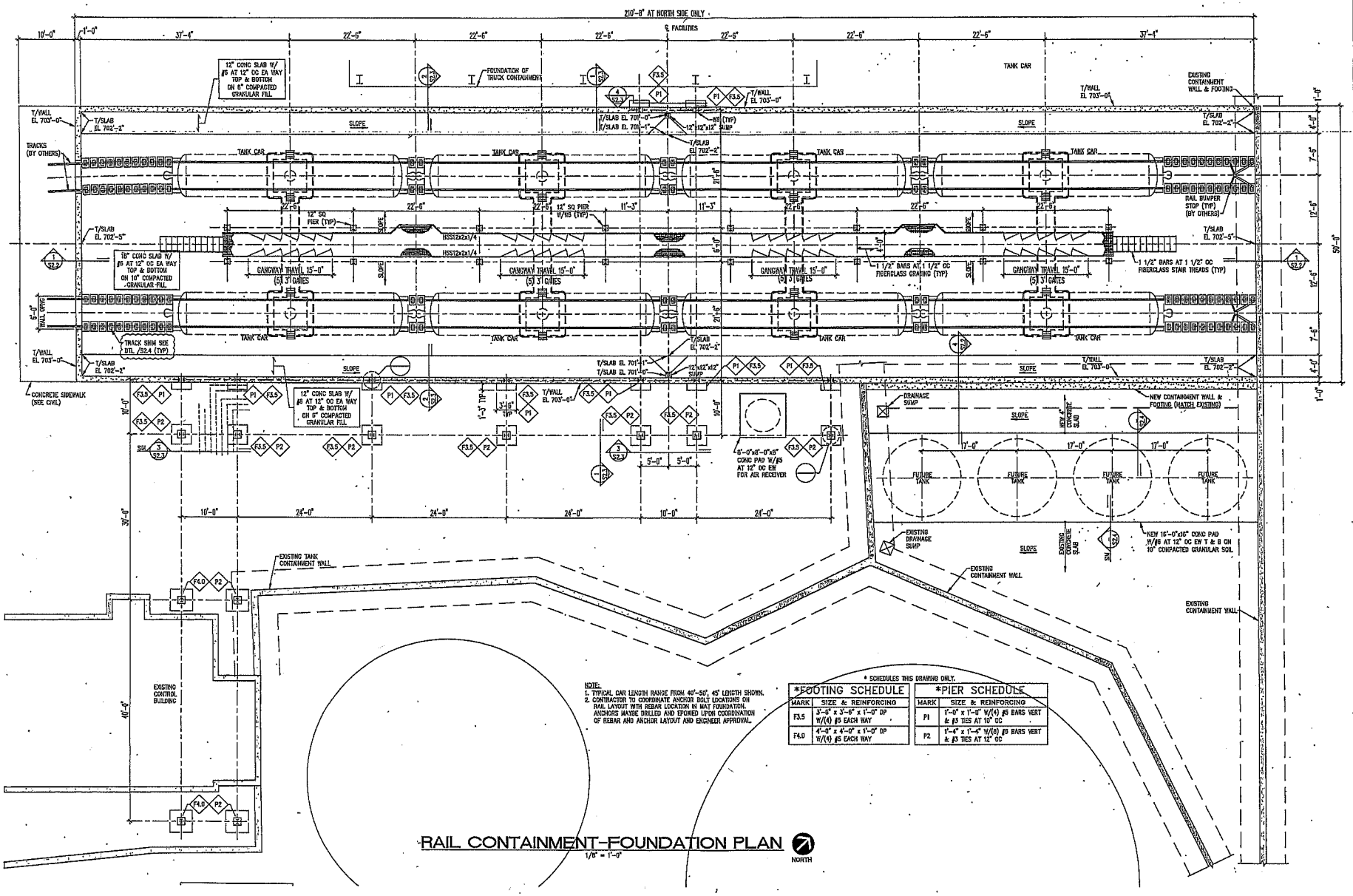
Rev.	Date	Description

Project #: 12146119
Drawn By: APP
Checked By: MAM
Issue Date: 03.02.15

Sheet Title: UTILITY PLAN

C4

Sheet: 4 of 8



NOTE:
1. TYPICAL CAR LENGTH RANGE FROM 40'-50', 45' LENGTH SHOWN.
2. CONTRACTOR TO COORDINATE ANCHOR BOLT LOCATIONS ON RAIL LAYOUT WITH REBAR LOCATION IN MAT FOUNDATION. ANCHORS MAYBE DRILLED AND EPOXIED UPON COORDINATION OF REBAR AND ANCHOR LAYOUT AND ENGINEER APPROVAL.

* SCHEDULES THIS DRAWING ONLY.

*FOOTING SCHEDULE	
MARK	SIZE & REINFORCING
F3.5	3'-0" x 3'-6" x 1'-0" DP W/(4) #5 EACH WAY
F4.0	4'-0" x 4'-0" x 1'-0" DP W/(4) #5 EACH WAY

*PIER SCHEDULE	
MARK	SIZE & REINFORCING
P1	1'-0" x 1'-0" W/(4) #5 BARS VERT & #3 TIES AT 10" OC
P2	1'-4" x 1'-4" W/(8) #8 BARS VERT & #3 TIES AT 12" OC

RAIL CONTAINMENT-FOUNDATION PLAN

1/8" = 1'-0"

NORTH

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Project Title:
FACILITY EXPANSION
HAWKINS, INC - BP 1 TERMINAL 2

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First M. Last, P.E.
Date: Reg. No.:

Rev.	Date	Description

Project #: 1114741.001
Drawn By: CJK
Checked By: DRH
Issue Date: XX.XX.XX

Sheet Title:
RAIL CONTAINMENT FOUNDATION PLAN

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Sheet: # of X

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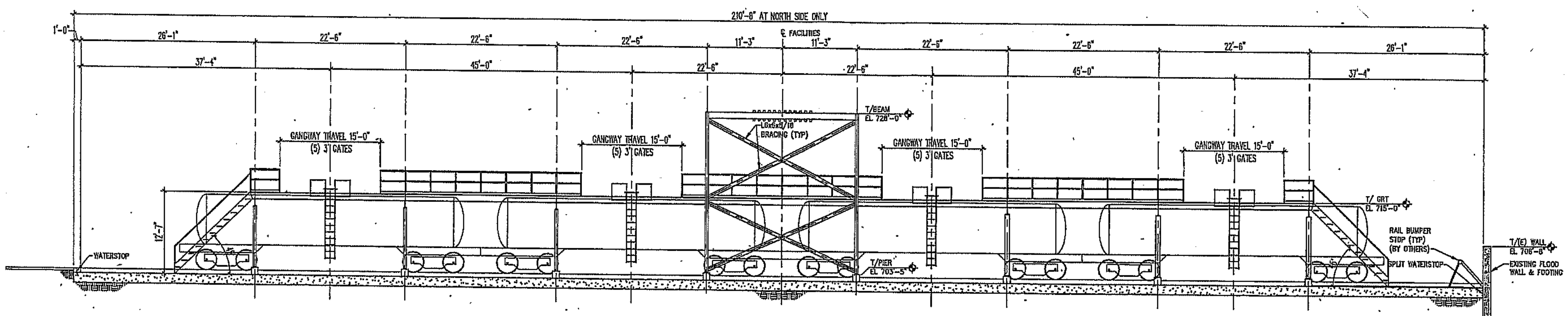

LOOKING NORTHWEST

1
S2.2
SECTION
1/8" = 1'-0"

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Project Title:
FACILITY EXPANSION
HAWKINS, INC - BP 1 TERMINAL 2

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Date: Reg. No.:

Rev.	Date	Description

Project #: 1114741.001
Drawn By: CJK
Checked By: DRH
Issue Date: XX.XX.XX
Sheet Title:
RAIL CONTAINMENT
PLAN &SECTION

S2.2
Sheet: # of X

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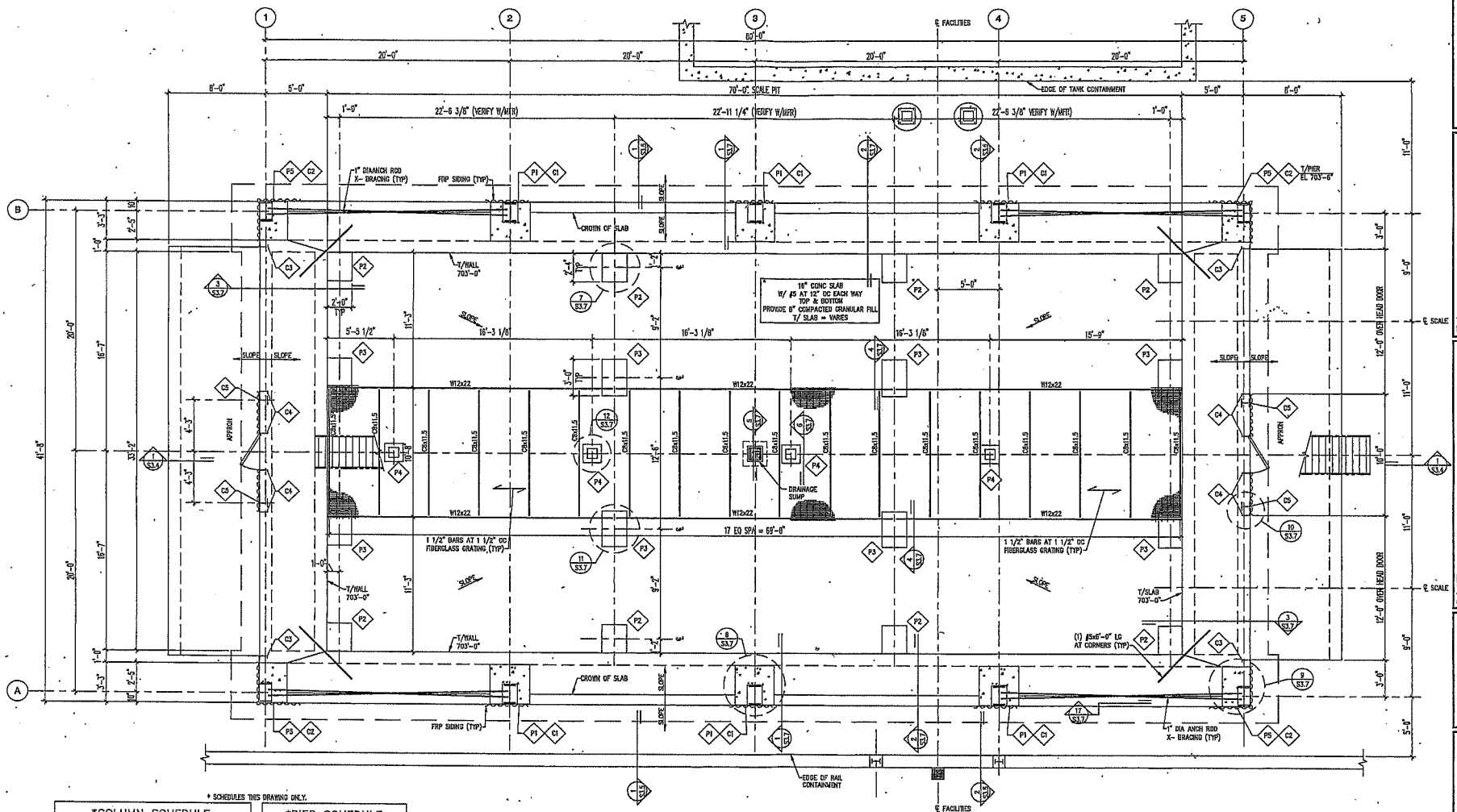

* SCHEDULES THIS DRAWING ONLY.

*COLUMN SCHEDULE		
MARK	DESCRIPTION	BASE PLATE SIZE
C1	W16x119	1"x20"x15" W/ (4) 1"ø ANCHOR BOLTS
C2	W10x76	1"x20"x12" W/ (4) 1"ø ANCHOR BOLTS
C3	C8x11.5	3/4" x 8" x 8" W/ (2) 3/4" ø ANCHOR BOLTS
C4	C8x11.5	SEE DETAIL....
C5	W8x35	SEE DETAIL....

*PIER SCHEDULE	
MARK	SIZE & REINFORCING
P1	3'-3" x 3'-3" W/(15) #7 BARS VERT & #3 TIES AT 12" OC
P2	2'-0" x 2'-4" W/(12) #6 BARS VERT & #3 TIES AT 12" OC
P3	2'-0" x 3'-0" W/(12) #6 BARS VERT & #3 TIES AT 12" OC
P4	1'-4" x 1'-4" W/(4) #6 BARS VERT & #3 TIES AT 12" OC
P5	2'-3" x 3'-3" W/(12) #6 BARS VERT & #3 TIES AT 12" OC

TRUCK CONTAINMENT-FOUNDATION PLAN

1/4" = 1'-0"

NORTH

NOTES:
1. CONTRACTOR TO PROVIDE FRP SIDING CAPABLE OF SUPPORTING 30PSF WIND LOAD. COORDINATE COLOR & CONFIGURATION WITH OWNER.

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Fiel M. Lael, P.E.
Date: Reg. No.:

Rev.	Date	Description

Project #: 1114741.021
Drawn By: CJK
Checked By: DRH
Issue Date: XX/XX/XX
Sheet Title:
TRUCK CONTAINMENT FOUNDATION PLAN

S3.0

Sheet: # of X

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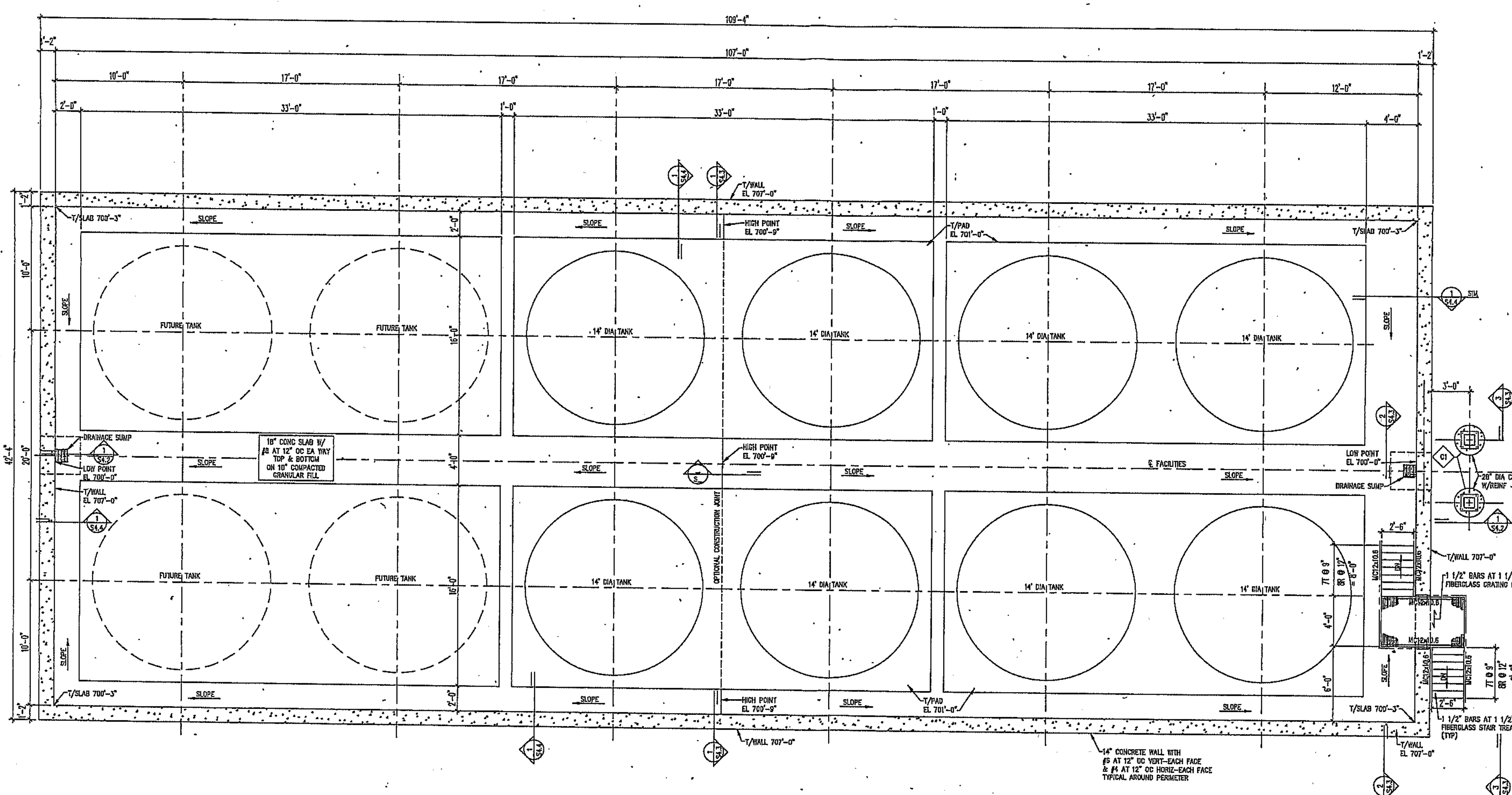

TANK CONTAINMENT FOUNDATION PLAN

1/4" = 1'-0"

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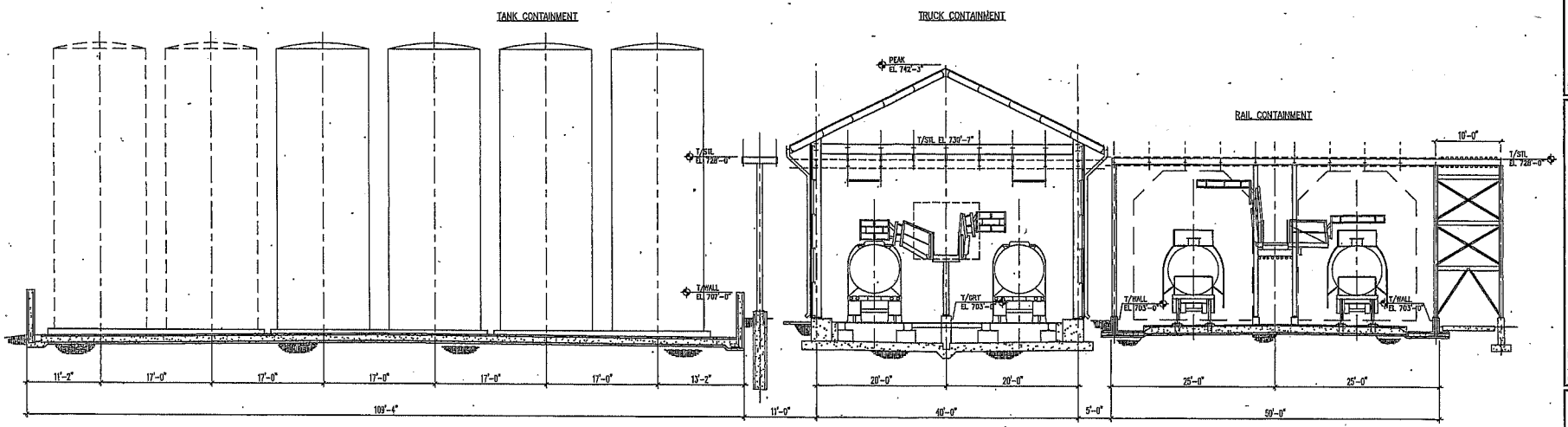
Date: Reg. No.:

Rev.	Date	Description

Project #: 1114741.001
Drawn By: CJK
Checked By: DRH
Issue Date: XX.XX.XX
Sheet Title: TANK CONTAINMENT FOUNDATION PLAN

Sheet: **S4.0** # of X



1 S5.0 OVERALL EAST-WEST SECTION

1/8" = 1'-0"

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Project Title:
FACILITY EXPANSION
HAWKINS, INC - BP12 TERMINAL 2

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Date: Reg. No.:

Rev.	Date	Description

Project #: 1114741.001
Drawn By: CJK
Checked By: DRH
Issue Date: XX.XX.XX
Sheet Title:
OVERALL EAST-WEST SECTION

S5.0
Sheet # of X

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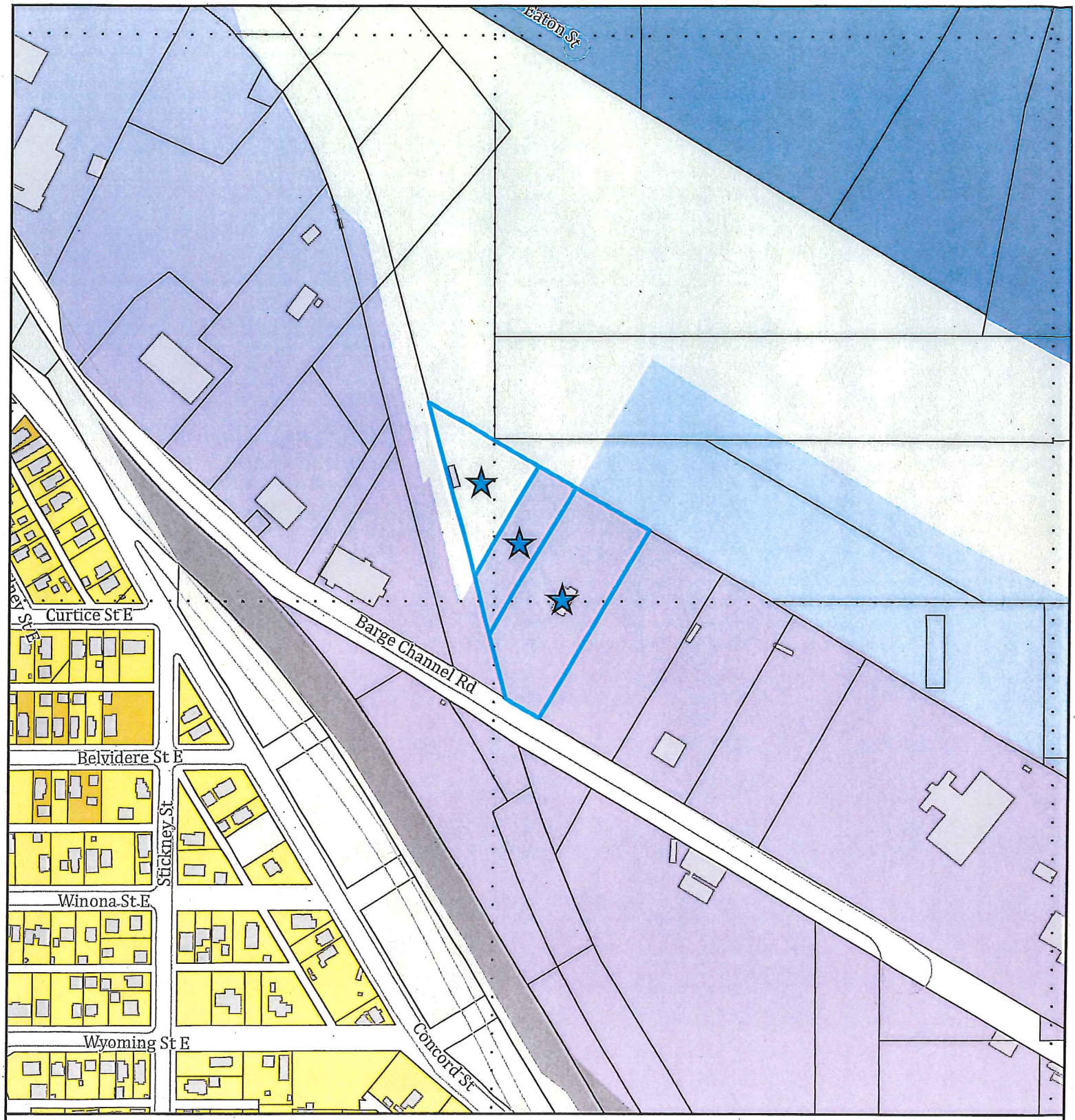


FILE NAME: Hawkins Chemical (Barge Channel)

APPLICATION TYPE: Conditional Use Permit

FILE #: 15-018147 DATE: 3/18/2015

PLANNING DISTRICT: 3

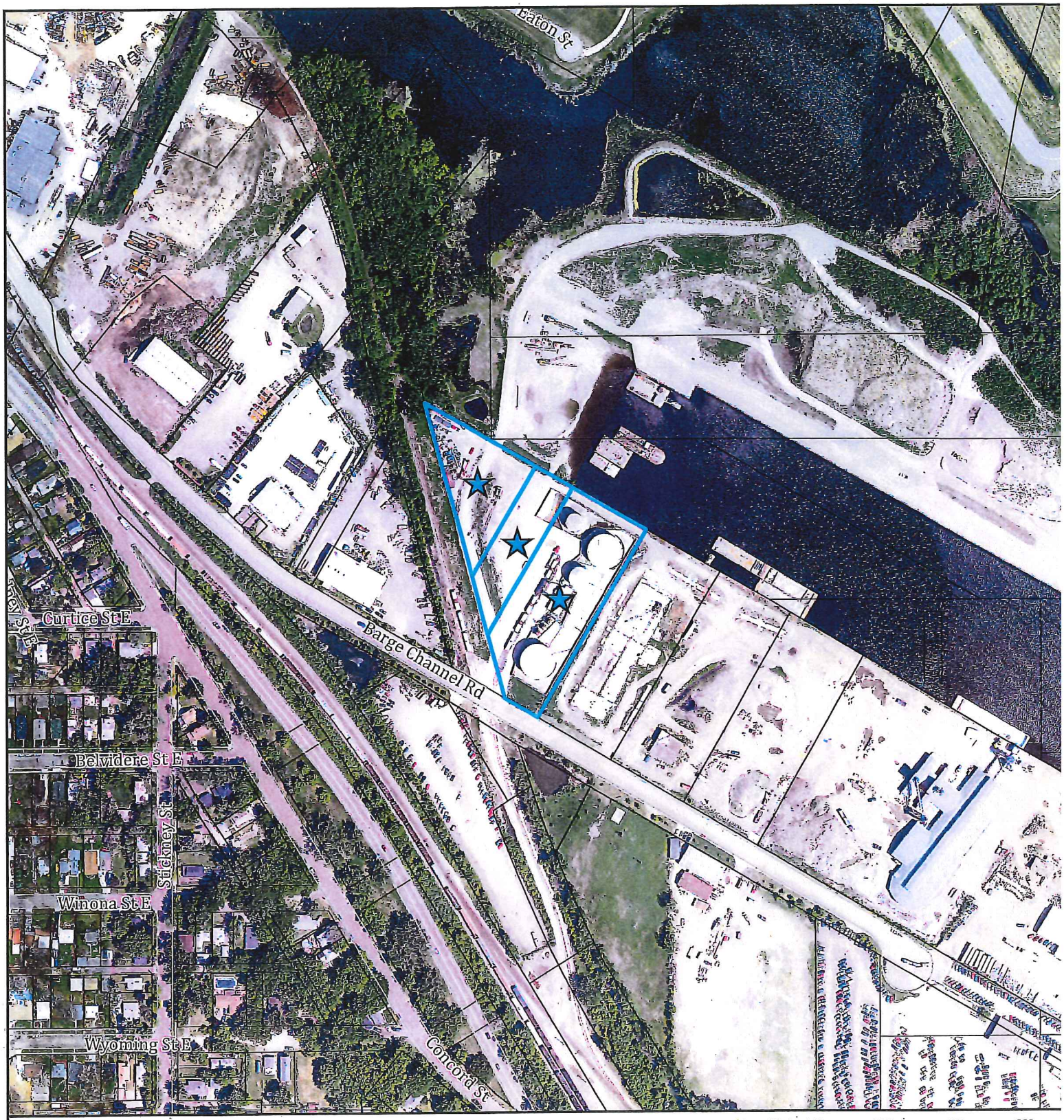
ZONING PANEL: 23

Land Use

- Single Family Detached
- Single Family Attached
- Industrial and Utility
- Railway
- Airport
- Undeveloped
- Water
- Subject Parcels
- Section Lines

N W E S

Saint Paul Department of Planning and Economic Development and Ramsey County



FILE NAME: Hawkins Chemical (Barge Channel)

APPLICATION TYPE: Conditional Use Permit

FILE #: 15-018147 DATE: 3/18/2015

PLANNING DISTRICT: 3

ZONING PANEL: 23

Aerial

Subject Parcels

N
W E
S

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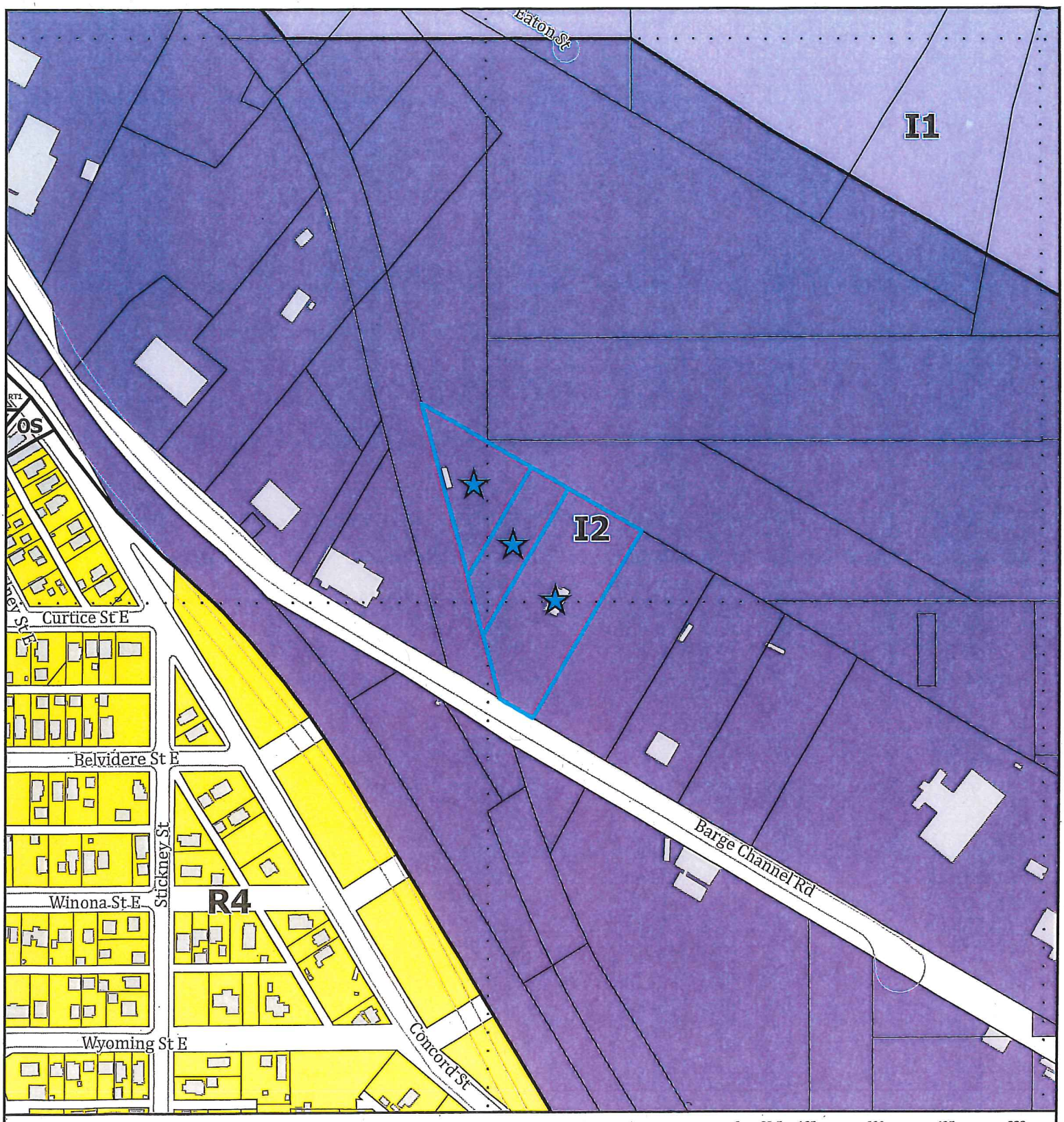

0 82.5 165 330 495 660 Feet

FILE NAME: Hawkins Chemical (Barge Channel)

APPLICATION TYPE: Conditional Use Permit

FILE #: 15-018147 DATE: 3/18/2015

PLANNING DISTRICT: 3

ZONING PANEL: 23

Zoning

- R4 One-Family
- RT1 Two-Family
- OS Office-Service
- I1 Light Industrial
- I2 General Industrial
- Subject Parcels
- Section Lines

N W E S

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