

k:\TWC_LDEV\OPPIDAN\Ramsey Industrial Bunker Lake Blvd\3 Design\CAD\PlanSheets\CO-COVER SHEET.dwg May 06, 2021 - 11:41am

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SITE DEVELOPMENT PLANS FOR RAMSEY SPEC INDUSTRIAL

S20&S29, T32N, R25W
RAMSEY, ANOKA COUNTY, MN

PROJECT TEAM:

ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.



PREPARED BY: MICHAEL C. BRANDT
767 EUSTIS STREET, SUITE 100
ST. PAUL, MN 55114
TELEPHONE (651) 645-4197

GEOTECHNICAL ENGINEER
AMERICAN ENGINEERING TESTING, INC.
550 CLEVELAND AVE N
ST PAUL, MN 55114
TELEPHONE: (651) 659-9001
CONTACT: ROBIN L. FLICKENGER

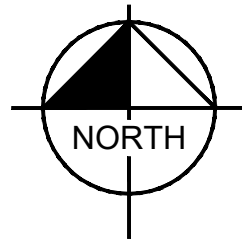
OWNER / DEVELOPER
OPPIDAN HOLDINGS LLC
400 WATER ST #200
EXCELSIOR, MN 55331
TELEPHONE: (952) 294-0353

SURVEYOR
EGAN, FIELD, & NOWAK, INC
1229 TYLER ST NE, STE 100
MINNEAPOLIS, MN 55413
TELEPHONE: (612) 466-3300
FAX: (612) 466-3383
CONTACT: ERIC ROESER

ARCHITECT
MOHAGEN HANSEN
1000 TWELVE OAKS CENTER DR
STE 200
MINNETONKA, MN 55391
TELEPHONE: (952) 426-7400



VICINITY
N.T.S.



SITE

NOTES:

- CONTRACTOR SHALL CONFIRM THAT THE EXISTING CONDITIONS FOR THE SITE MATCH WHAT IS SHOWN ON THE DRAWINGS INCLUDED PRIOR TO CONSTRUCTION.
- IF REPRODUCED, THE SCALES SHOWN ON THESE PLANS ARE BASED ON A 22x34 SHEET.
- ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICES COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.
- ALL GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS.

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L107	LANDSCAPE PLAN
L108	LANDSCAPE PLAN
L101	LANDSCAPE DETAILS

PRELIMINARY - NOT FOR CONSTRUCTION

RAMSEY SPEC
INDUSTRIAL
PREPARED FOR
OPPIDAN
HOLDINGS LLC

MN

COVER SHEET

I HEREBY CERTIFY THAT THIS PLAN
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 C. BRANDT
MN LIC. NO. 4261
DATE: 05/06/2021

KHA PROJECT	160774051
DATE	05/06/2021
SCALE	AS SHOWN
DESIGNED BY	CUJ
DRAWN BY	KAM
CHECKED BY	MCB

Kimley»Horn

2021 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

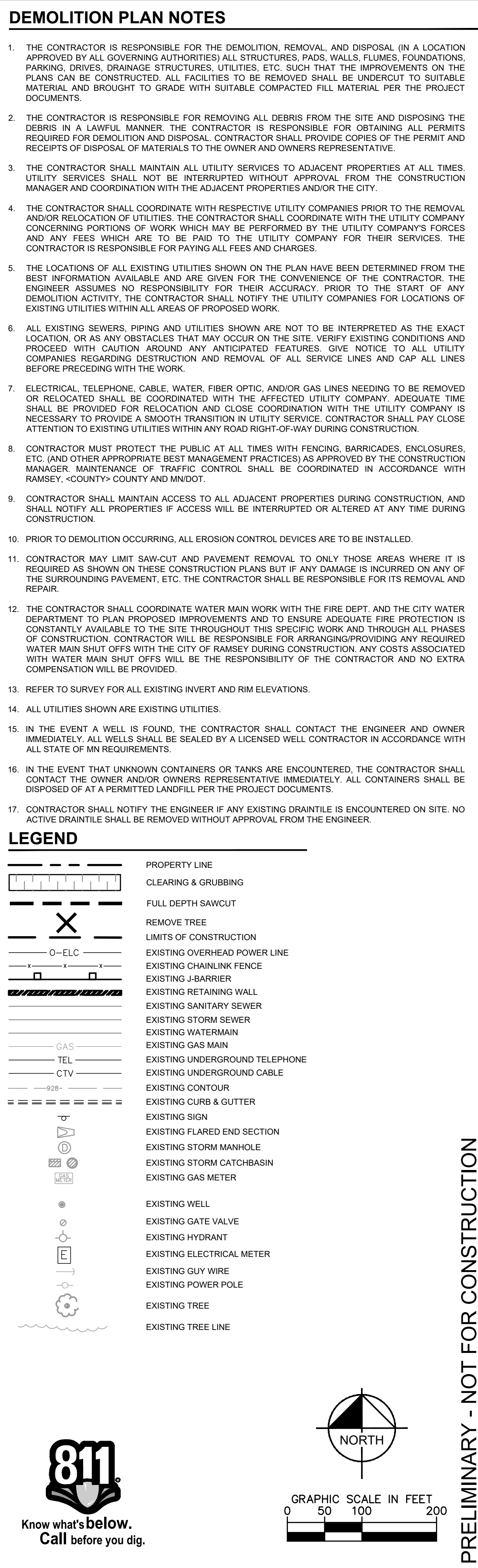
RAMSEY

SHEET NUMBER
C000

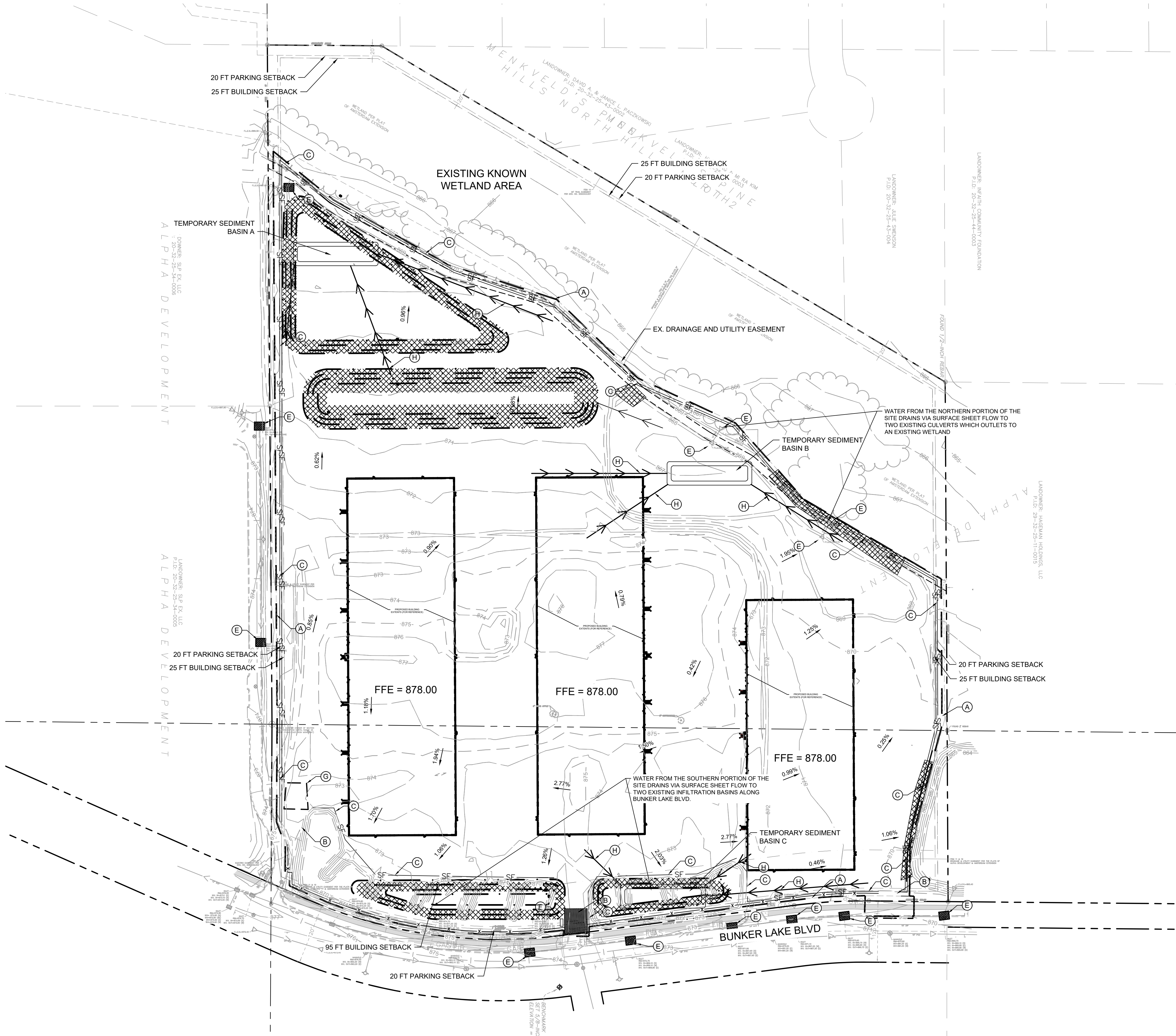
REVISIONS

DATE

BY



SHEET NUMBER		RAMSEY		RAMSEY SPEC INDUSTRIAL PREPARED FOR OPPIDAN HOLDINGS LLC		MIN		DEMO PLAN		KHA PROJECT 160774051 DATE 05/06/2021 SCALE AS SHOWN DESIGNED BY XXX DRAWN BY XXX CHECKED BY XXX		Kimley»»Horn © 2021 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE: 651-645-4197 WWW.KIMLEY-HORN.COM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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LEGEND

ROCK ENTRANCE

EROSION CONTROL BLANKET

INLET PROTECTION

SILT FENCE

LIMITS OF DISTURBANCE

SAFETY FENCE

BIOROLL

EROSION CONTROL PLAN NOTES

1.

ALL PERIMETER SILT FENCE AND ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.

2.

THE SUBCONTRACTOR SHALL CONSTRUCT DRAINAGE BASINS PRIOR TO SITE GRADING.

3.

THE SUBCONTRACTOR SHALL INSTALL CATCH BASIN EROSION CONTROL MEASURES.

4.

WITHIN ONE WEEK (7 DAYS) OF SITE GRADING, ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED, SOD, OR ROCK BASE. REFER TO LANDSCAPE PLANS FOR MATERIALS.

5.

ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH CITY, STATE, AND WATERSHED DISTRICT PERMITS.

6.

THE SUBCONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES, INCLUDING THE REMOVAL OF SILT IN FRONT OF SILT FENCES DURING THE DURATION OF THE CONSTRUCTION.

7.

ANY EXCESS SEDIMENT IN PROPOSED BASINS SHALL BE REMOVED BY THE CONTRACTOR.

8.

REMOVAL ALL EROSION CONTROL MEASURES AFTER VEGETATION IS ESTABLISHED.

9.

THE SUBCONTRACTOR SHALL REMOVE ALL SOILS AND SEDIMENT TRACKED ONTO EXISTING STREETS AND PAVED AREAS AND SHALL SWEEP ADJACENT STREETS AS NECESSARY IN ACCORDANCE WITH CITY REQUIREMENTS.

10.

IF BLOWING DUST BECOMES A NUISANCE, THE CONTRACTOR SHALL APPLY WATER FROM A TANK TRUCK TO ALL CONSTRUCTION AREAS.

11.

88TH AVENUE NORTH SHALL BE SWEEPED A MINIMUM OF 1 TIMES PER WEEK OR AS DIRECTED BY ENGINEER.

SEQUENCE OF CONSTRUCTION:

UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING LAYDOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.

BMP AND EROSION CONTROL INSTALLATION SEQUENCE SHALL BE AS FOLLOWS:

1.

INSTALL INLET PROTECTION AT EXISTING STORMWATER CULVERTS.

2.

CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (1), CONCRETE WASHOUT PIT (1) AND INSTALL SILT FENCE.

3.

PREPARE TEMPORARY PARKING AND STORAGE AREA.

4.

CONSTRUCT AND STABILIZE DIVERSIONS AND TEMPORARY SEDIMENT TRAPS.

5.

PERFORM CLEARING AND GRUBBING OF THE SITE. PERFORM MASS GRADING. ROUGH GRADE TO ESTABLISH PROPOSED DRAINAGE PATTERNS.

6.

START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.

7.

TEMPORARILY SEED WITH PURE LIVE SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE OR AS REQUIRED BY NPDES AND/OR CITY OF RAMSEY GRADING PERMIT.

SWPPP UPDATES AND AMENDMENTS

THE SUBCONTRACTOR MUST UPDATE THE SWPPP, INCLUDING THE JOBSITE BINDER AND SITE MAPS, TO REFLECT THE PROGRESS OF CONSTRUCTION ACTIVITIES AND GENERAL CHANGES TO THE PROJECT SITE. UPDATES SHALL BE MADE DAILY TO TRACK PROGRESS WHEN ANY OF THE FOLLOWING ACTIVITIES OCCUR: BMP INSTALLATION, MODIFICATION OR REMOVAL, CONSTRUCTION ACTIVITIES (E.G., PAVING, STORM SEWER INSTALLATION, FOOTING INSTALLATION, ETC.), CLEARING, GRUBBING OR GRADING, OR TEMPORARY OR PERMANENT STABILIZATION.

IMPORTANT:

THE PRIMARY SUBCONTRACTOR MUST SUBMIT A REQUEST FOR INFORMATION (RFI) TO THE CEC AND OBTAIN WRITTEN CEC APPROVAL BEFORE DOING ANY OF THE FOLLOWING:

1.

MODIFYING EROSION OR SEDIMENT CONTROL BMPs (SUBSTITUTIONS ARE TYPICALLY ONLY APPROVED IF SPECIFIED MATERIALS ARE NOT AVAILABLE OR THERE IS A VALID REASON THE SPECIFIED BMP WILL NOT WORK)

2.

ADDING/DELETING EROSION OR SEDIMENT CONTROL BMPs;

3.

MODIFYING THE SWPPP IMPLEMENTATION SEQUENCE; OR

4.

PERFORMING ANY ACTIONS OR IN ANY MANNER THAT IS CONTRARY TO THE SWPPP.

THE SUBCONTRACTOR MAY MODIFY OR ADD ADDITIONAL BMPs, WITHOUT CEC APPROVAL, IN AN EMERGENCY SITUATION TO PREVENT SEDIMENT DISCHARGE OR PROTECT WATER QUALITY; HOWEVER, GC MUST NOTIFY THE CEC AS SOON AS PRACTICAL AS TO THEIR ACTIONS TO DISCUSS THE NEED FOR ADDITIONAL OR SUPPLEMENTAL MEASURES AND TO OBTAIN THE REQUIRED APPROVALS. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE TO ENSURE COMPLIANCE WITH THE PERMIT AND PROTECTION OF DOWNSTREAM WATER QUALITY.

AMENDING THE SWPPP DOES NOT MEAN THAT IT HAS TO BE REPRINTED. IT IS ACCEPTABLE TO ADD ADDENDA, SKETCHES, NEW SECTIONS, DETAILS, AND/OR REVISED DRAWINGS THAT HAVE THE CEC NAME IN PRINT, ARE STAMPED, SIGNED, DATED, AND ARE ACCOMPANIED BY WRITTEN COPY OF THE ASSOCIATED RFI AND ITS RESPONSE FROM CEC. ENGINEERED ITEMS MUST BE SIGNED AND STAMPED BY THE CEC OF RECORD FOR THE PROJECT.

KEYNOTE LEGEND

(A)

LIMITS OF DISTURBANCE

(B)

ROCK CONSTRUCTION ENTRANCE

(C)

SILT FENCE

(D)

BIO ROLL

(E)

INLET PROTECTION

(F)

SWPPP SIGN

(G)

CONCRETE WASH-OUT AREA

(H)

DIVERSION DITCH

Know what's below.
Call before you dig.

PRELIMINARY - NOT FOR CONSTRUCTION

RAMSEY SPEC
INDUSTRIAL
PREPARED FOR
OPPIDAN
HOLDINGS LLC

RAMSEY

EROSION AND
SEDIMENT
CONTROL PLAN -
PHASE 1

MM

RAMSEY PROJECT
160774051

DATE
05/06/2021

SCALE
AS SHOWN

DESIGNED BY
XXX

DRAWN BY
XXX

CHECKED BY
XXX

REVISIONS

DATE

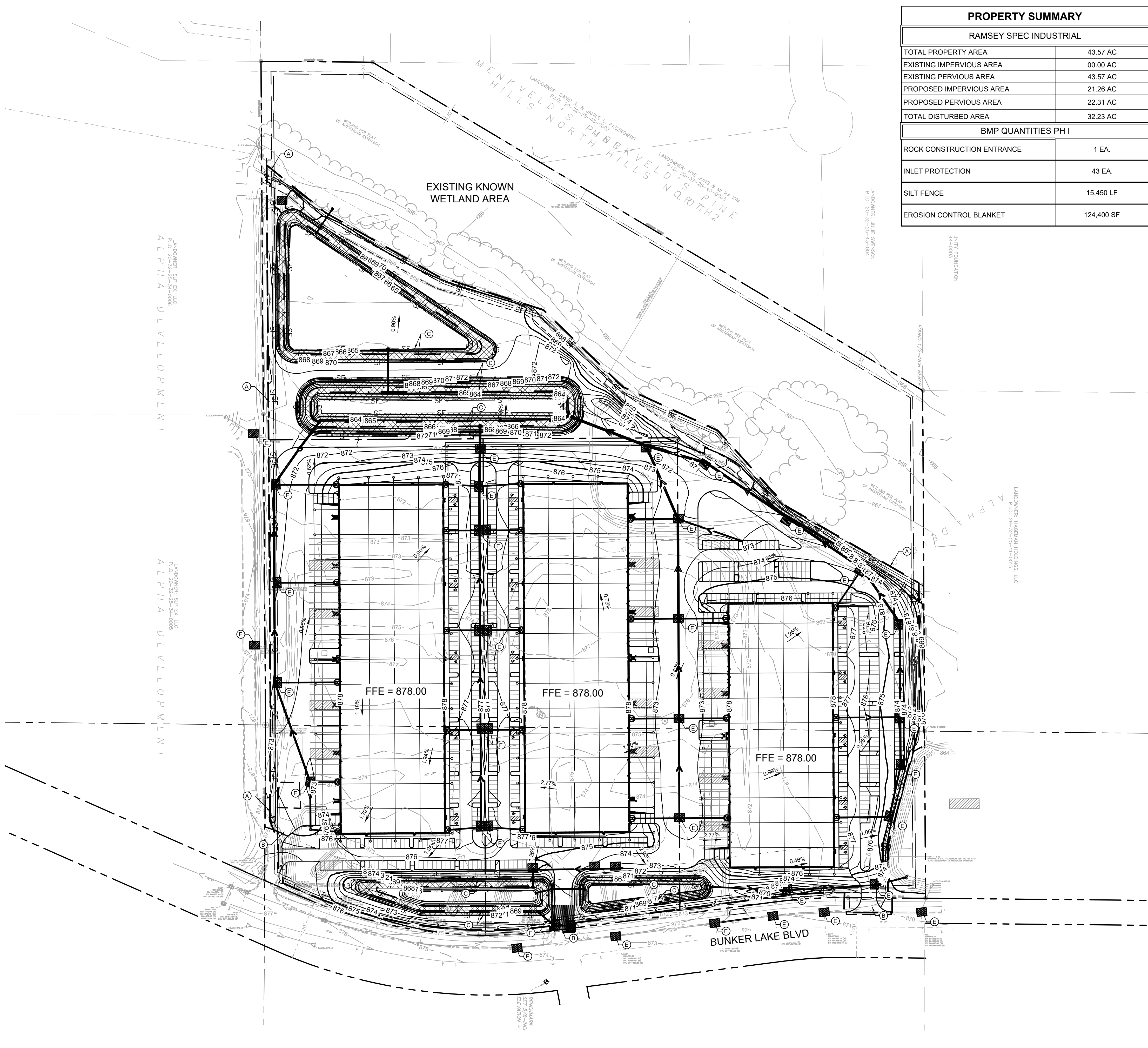
BY

SHEET NUMBER
C300

Kimley»Horn

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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-945-4197
WWW.KIMLEY-HORN.COM

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PROPERTY SUMMARY	
RAMSEY SPEC INDUSTRIAL	
TOTAL PROPERTY AREA	43.57 AC
EXISTING IMPERVIOUS AREA	00.00 AC
EXISTING PERVIOUS AREA	43.57 AC
PROPOSED IMPERVIOUS AREA	21.26 AC
PROPOSED PERVIOUS AREA	22.31 AC
TOTAL DISTURBED AREA	32.23 AC
BMP QUANTITIES PH I	
ROCK CONSTRUCTION ENTRANCE	1 EA.
INLET PROTECTION	43 EA.
SILT FENCE	15,450 LF
EROSION CONTROL BLANKET	124,400 SF

LEGEND	
	ROCK ENTRANCE
	EROSION CONTROL BLANKET
	INLET PROTECTION
	SILT FENCE
	LIMITS OF DISTURBANCE

EROSION CONTROL PLAN NOTES

- ALL PERIMETER SILT FENCE AND ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
- THE SUBCONTRACTOR SHALL CONSTRUCT DRAINAGE BASINS PRIOR TO SITE GRADING.
- THE SUBCONTRACTOR SHALL INSTALL CATCH BASIN EROSION CONTROL MEASURES.
- WITHIN ONE WEEK (7 DAYS) OF SITE GRADING, ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED, SOD, OR ROCK BASE. REFER TO LANDSCAPE PLANS FOR MATERIALS.
- ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH CITY, STATE, AND WATERSHED DISTRICT PERMITS.
- THE SUBCONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES, INCLUDING THE REMOVAL OF SILT IN FRONT OF SILT FENCES DURING THE DURATION OF THE CONSTRUCTION.
- ANY EXCESS SEDIMENT IN PROPOSED BASINS SHALL BE REMOVED BY THE CONTRACTOR.
- REMOVAL ALL EROSION CONTROL MEASURES AFTER VEGETATION IS ESTABLISHED.
- THE SUBCONTRACTOR SHALL REMOVE ALL SOILS AND SEDIMENT TRACKED ONTO EXISTING STREETS AND PAVED AREAS AND SHALL SWEEP ADJACENT STREETS AS NECESSARY IN ACCORDANCE WITH CITY REQUIREMENTS.
- IF BLOWING DUST BECOMES A NUISANCE, THE CONTRACTOR SHALL APPLY WATER FROM A TANK TRUCK TO ALL CONSTRUCTION AREAS.
- 89TH AVENUE NORTH SHALL BE SWEEP A MINIMUM OF 1 TIMES PER WEEK OR AS DIRECTED BY ENGINEER.

SEQUENCE OF CONSTRUCTION:

UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAYDOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.

BMP AND EROSION CONTROL INSTALLATION SEQUENCE SHALL BE AS FOLLOWS:

- INSTALL INLET PROTECTION AT EXISTING STORMWATER CULVERTS.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (1), CONCRETE WASHOUT PIT (1) AND INSTALL SILT FENCE.
- PREPARE TEMPORARY PARKING AND STORAGE AREA.
- CONSTRUCT AND STABILIZE DIVERSIONS AND TEMPORARY SEDIMENT TRAPS.
- PERFORM CLEARING AND GRUBBING OF THE SITE. PERFORM MASS GRADING. ROUGH GRADE TO ESTABLISH PROPOSED DRAINAGE PATTERNS.
- START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
- TEMPORARILY SEED WITH PURE LIVE SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE OR AS REQUIRED BY NPDES AND/OR CITY OF RAMSEY GRADING PERMIT.

SWPPP UPDATES AND AMENDMENTS

THE SUBCONTRACTOR MUST UPDATE THE SWPPP, INCLUDING THE JOBSITE BINDER AND SITE MAPS, TO REFLECT THE PROGRESS OF CONSTRUCTION ACTIVITIES AND GENERAL CHANGES TO THE PROJECT SITE. UPDATES SHALL BE MADE DAILY TO TRACK PROGRESS WHEN ANY OF THE FOLLOWING ACTIVITIES OCCUR: BMP INSTALLATION, MODIFICATION OR REMOVAL, CONSTRUCTION ACTIVITIES (E.G., PAVING, STORM SEWER INSTALLATION, FOOTING INSTALLATION, ETC.), CLEARING, GRUBBING OR GRADING, OR TEMPORARY OR PERMANENT STABILIZATION.

IMPORTANT:
THE PRIMARY SUBCONTRACTOR MUST SUBMIT A REQUEST FOR INFORMATION (RFI) TO THE CEC AND OBTAIN WRITTEN CEC APPROVAL BEFORE DOING ANY OF THE FOLLOWING:

- MODIFYING EROSION OR SEDIMENT CONTROL BMPs (SUBSTITUTIONS ARE TYPICALLY ONLY APPROVED IF SPECIFIED MATERIALS ARE NOT AVAILABLE OR THERE IS A VALID REASON THE SPECIFIED BMP WILL NOT WORK)
- ADDING/DELETING EROSION OR SEDIMENT CONTROL BMPs.
- MODIFYING THE SWPPP IMPLEMENTATION SEQUENCE; OR
- PERFORMING ANY ACTIONS OR IN ANY MANNER THAT IS CONTRARY TO THE SWPPP.

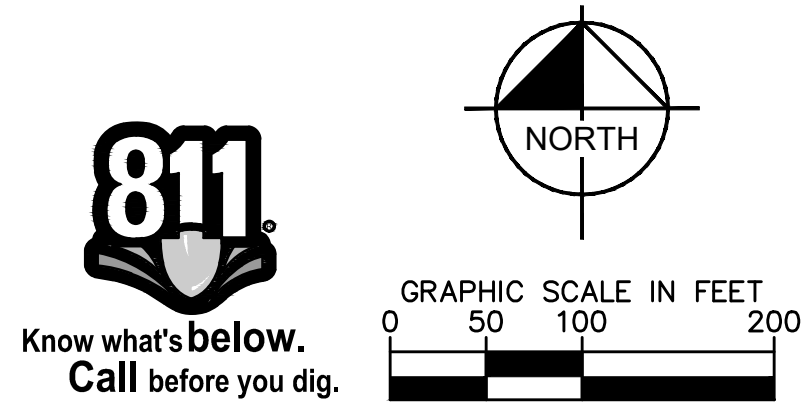
THE SUBCONTRACTOR MAY MODIFY OR ADD ADDITIONAL BMPs, WITHOUT CEC APPROVAL, IN AN EMERGENCY SITUATION TO PREVENT SEDIMENT DISCHARGE OR PROTECT WATER QUALITY; HOWEVER, GC MUST NOTIFY THE CEC AS SOON AS PRACTICAL AS TO THEIR ACTIONS TO DISCUSS THE NEED FOR ADDITIONAL OR SUPPLEMENTAL MEASURES AND TO OBTAIN THE REQUIRED APPROVALS. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE TO ENSURE COMPLIANCE WITH THE PERMIT AND PROTECTION OF DOWNSTREAM WATER QUALITY.

AMENDING THE SWPPP DOES NOT MEAN THAT IT HAS TO BE REPRINTED. IT IS ACCEPTABLE TO ADD ADDENDA, SKETCHES, NEW SECTIONS, DETAILS, AND/OR REVISED DRAWINGS THAT HAVE THE CEC NAME IN PRINT, ARE STAMPED, SIGNED, DATED, AND ARE ACCOMPANIED BY WRITTEN COPY OF THE ASSOCIATED RFI AND ITS RESPONSE FROM CEC. ENGINEERED ITEMS MUST BE STAMPED AND STAMPED BY THE CEC OF RECORD FOR THE PROJECT.

PROPERTY SUMMARY	
RAMSEY SPEC INDUSTRIAL	
TOTAL PROPERTY AREA	43.57 AC
EXISTING IMPERVIOUS AREA	00.00 AC
EXISTING PERVIOUS AREA	43.57 AC
PROPOSED IMPERVIOUS AREA	21.26 AC
PROPOSED PERVIOUS AREA	22.31 AC
TOTAL DISTURBED AREA	32.23 AC

KEYNOTE LEGEND

(A)	LIMITS OF DISTURBANCE
(B)	ROCK CONSTRUCTION ENTRANCE
(C)	SILT FENCE
(D)	BIO ROLL
(E)	INLET PROTECTION
(F)	SWPPP SIGN



PRELIMINARY - NOT FOR CONSTRUCTION

RAMSEY SPEC INDUSTRIAL

PREPARED FOR

OPPIDAN HOLDINGS LLC

EROSION AND SEDIMENT CONTROL PLAN - PHASE 1

MM

811

Know what's below.
Call before you dig.

Kimley»Horn

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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-945-4197
WWW.KIMLEY-HORN.COM

REVISIONS

DATE

BY

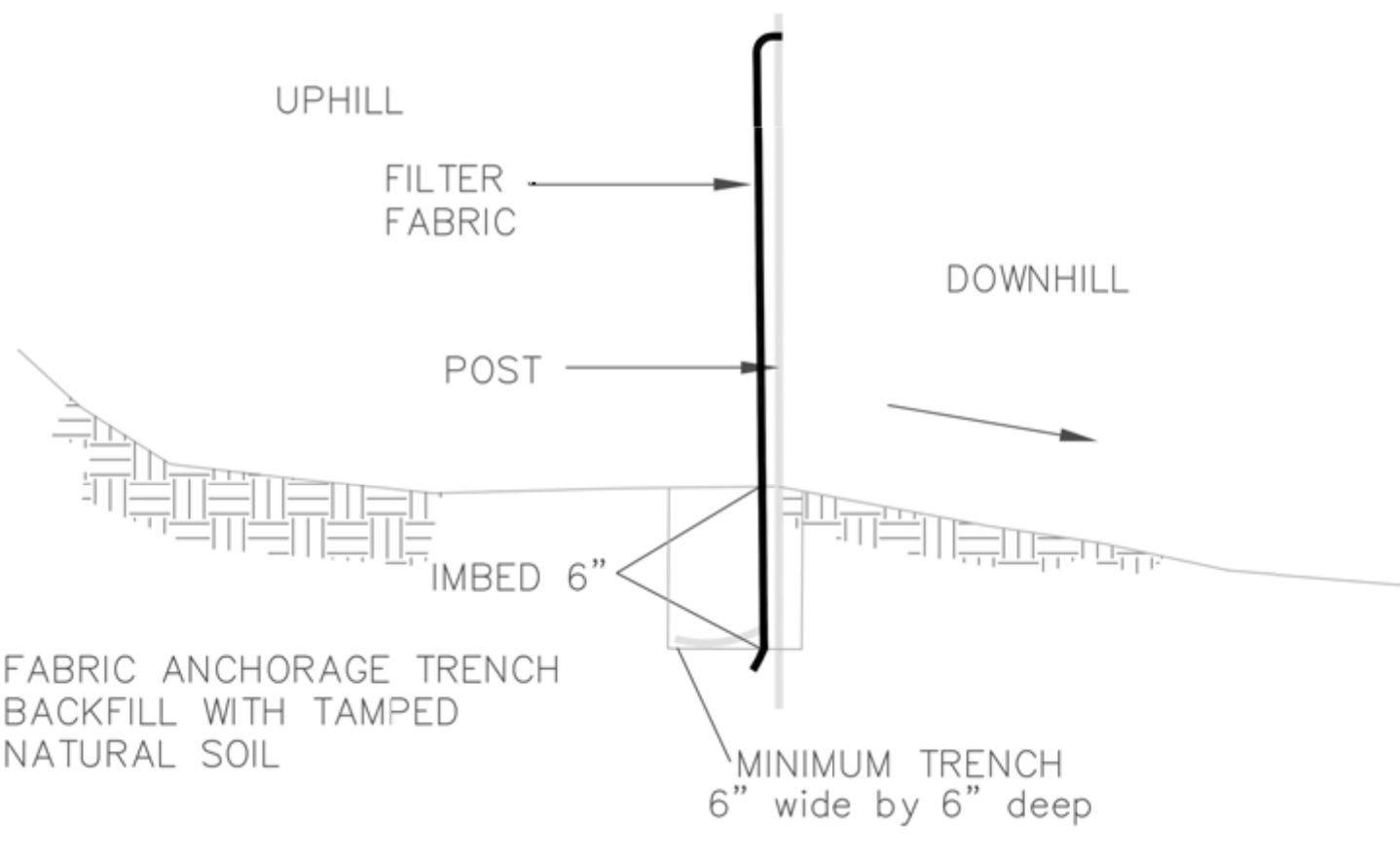
SHEET NUMBER

C300

k:\TWC_LDEV\OPPIDAN\Ramsey Industrial Bunker Lake Blvd\3 Design\CAD\PlanSheets\C3-EROS DETAILS.dwg May 06, 2021 - 11:43am

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FOR REFERENCE ONLY



UPHILL

FILTER FABRIC

POST

DOWNHILL

IMBED 6"

FABRIC ANCHORAGE TRENCH BACKFILL WITH TAMPED NATURAL SOIL

MINIMUM TRENCH 6" wide by 6" deep

INSTALL AS PER FILTER FABRIC MANUFACTURER'S RECOMMENDATIONS

SILT FENCE DETAIL

NO SCALE

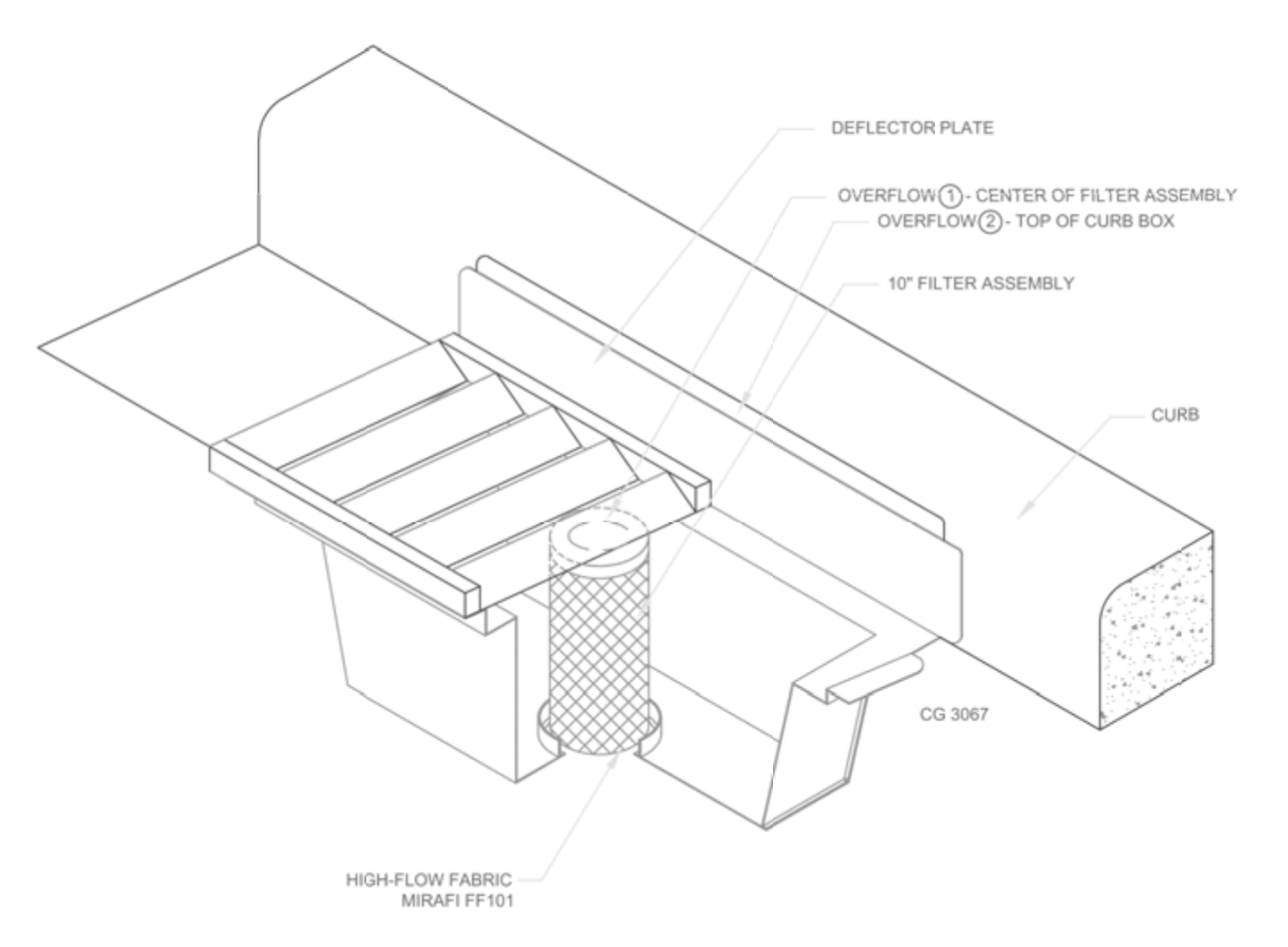
APPROVED:
1 - 2016



CITY PLATE No. ERO-1

STANDARD DETAILS:
SILT FENCE

FOR REFERENCE ONLY



DEFLECTOR PLATE

OVERFLOW ① - CENTER OF FILTER ASSEMBLY

OVERFLOW ② - TOP OF CURB BOX

10" FILTER ASSEMBLY

CURB

CG 3067

HIGH-FLOW FABRIC MIRAFI FF101

INLET PROTECTION - WIMCO OR EQUAL

N.T.S.

NOTE:
THIS INLET PROTECTION SHALL BE USED IMMEDIATELY FOLLOWING CURB & GUTTER CONSTRUCTION. INLET PROTECTION SHALL REMAIN INSTALLED AND MAINTAINED UNTIL ALL HOME CONSTRUCTION IS COMPLETE.

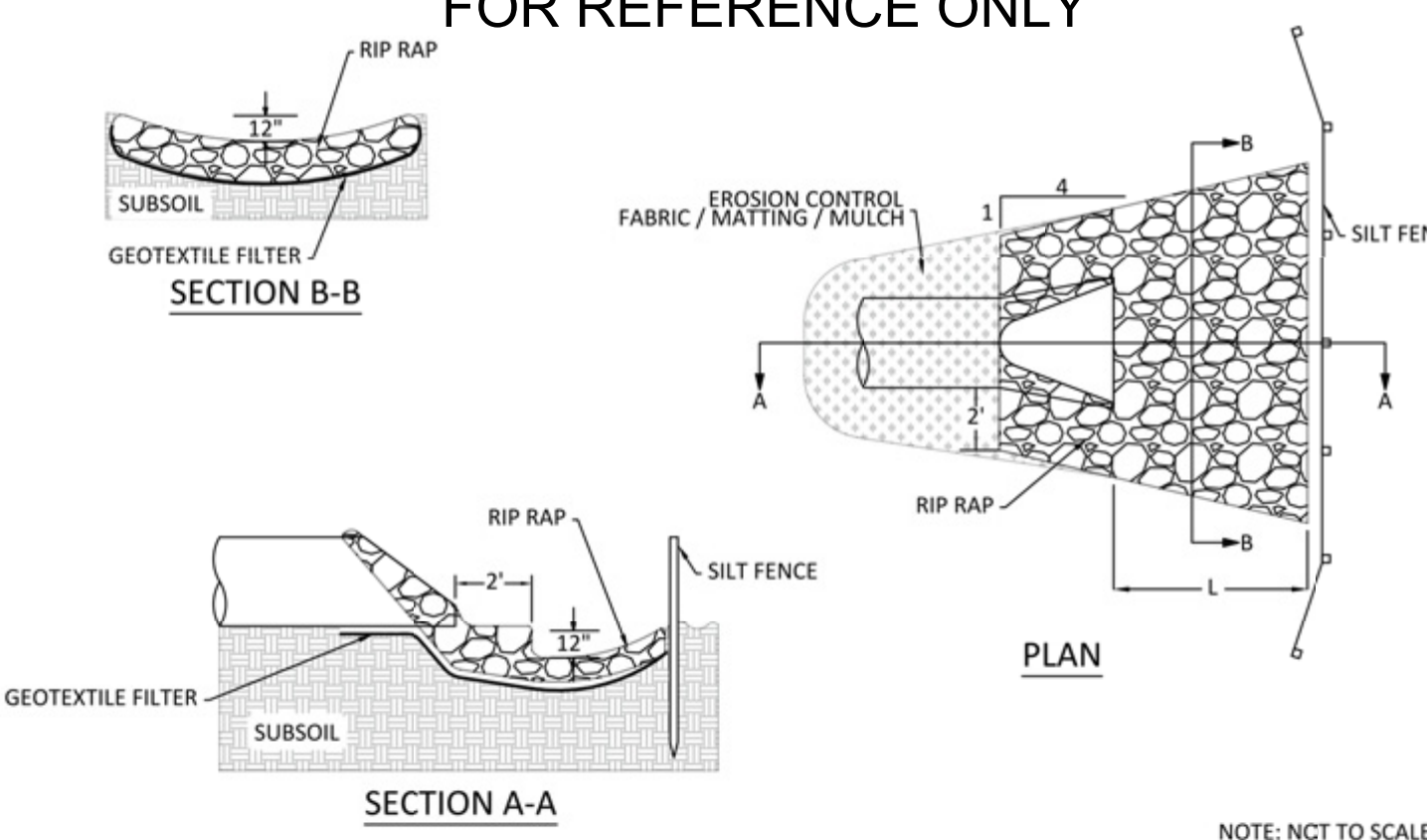
APPROVED:
1 - 2016



CITY PLATE No. ERO-2

STANDARD DETAILS:
INLET PROTECTION

FOR REFERENCE ONLY



SECTION B-B

SECTION A-A

PLAN

NOTE: NCT TO SCALE

NOTES:

- ON SLOPES 4:1 OR GREATER, ANCHOR OR STRAIGHT DISKED STRAW MULCH, SEEDING NETTING, GABRIC, OR MATTING SUCH AS EXCELSIOR SHALL BE USED TO STABILIZE DISTURBED SOILS. THESE EXPOSED SOILS MUST BE STABILIZED IMMEDIATELY AFTER GRADING OF SOIL IS COMPLETE.
- A SKIRTING OF EROSION CONTROL FABRIC OR MULCH MUST BE USED TO PROTECT OUTLETS AS ILLUSTRATED REGARDLESS OF SLOPE.
- RIP RAP IS CLASS III PLACED 18" THICK.
- FOR PIPE GREATER THAN 48" DIAMETER OR 58" SPAN, QUANTITY OF GEOTEXTILE FABRIC AND RIP RAP WILL BE HANDLED IN A CASE BY CASE MANNER.
- GEOTEXTILE FABRIC SHALL COVER THE BOTTOM AND SIDES OF THE AREA EXCAVATED FOR THE RIP RAP MATERIAL.

RIP RAP AT RCP OUTLETS			
DIA. OF PIPE (IN.)	L (FT.)	GEOTEXTILE FABRIC (SY)	18" DEPTH RIP RAP (CU. YD)
12	8	19.6	4.4
15	8	20.8	4.8
18	10	25.6	6.4
21	10	27.4	7.1
24	12	33.4	9.2
27	12	35.2	9.9
30	14	41.6	12.3
36	16	50.5	15.8
42	18	57.8	18.7
48	20	66.5	22.2

RIP RAP AT RCP-A OUTLETS			
SPAN OF PIPE (IN.)	L (FT.)	GEOTEXTILE FABRIC (SY)	18" DEPTH RIP RAP (CU. YD)
22	10	25.6	6.1
28	12	33.2	8.5
36	14	41.5	11.2
43	16	50.5	14.3
51	18	57.5	16.9
58	20	65.2	19.8

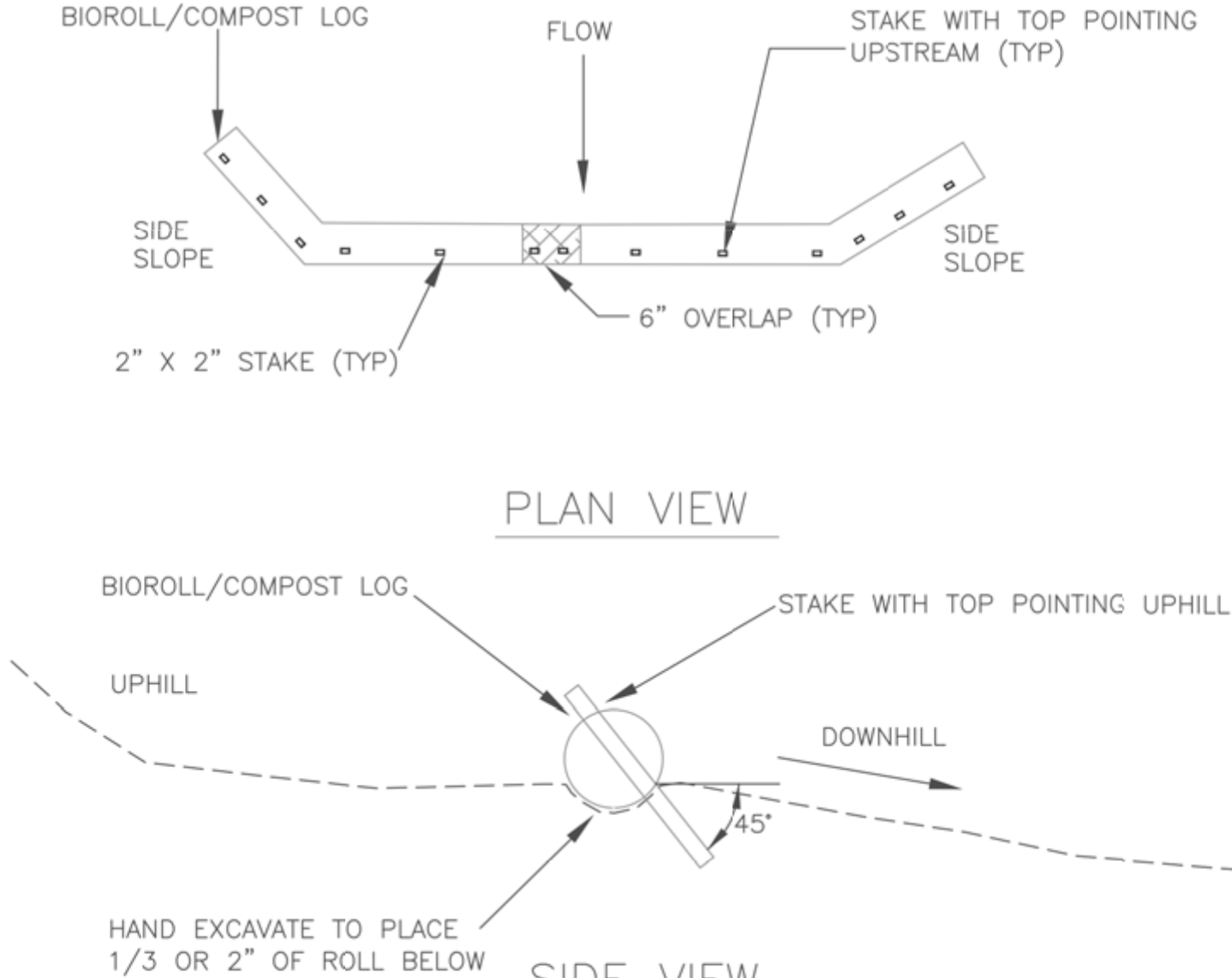
APPROVED:
9 - 2016



CITY PLATE No. ERO-3

STANDARD DETAILS:
RIP-RAP

FOR REFERENCE ONLY



BIOROLL/COMPOST LOG

FLOW

STAKE WITH TOP POINTING UPSTREAM (TYP)

SIDE SLOPE

2" X 2" STAKE (TYP)

6" OVERLAP (TYP)

PLAN VIEW

BIOROLL/COMPOST LOG

UPHILL

STAKE WITH TOP POINTING UPHILL

DOWNHILL

45°

SIDE VIEW

HAND EXCAVATE TO PLACE 1/3 OR 2" OF ROLL BELOW ADJACENT GRADE

NO SCALE

NOTE:
STAKE INTO GROUND WITH WOOD STAKES DRIVING STAKE 6" INTO GROUND AND PROTRUDING 2" ABOVE LOG
WOOD STAKES ARE A MINIMUM 0.5" X 2" X 16" AND PLACED EVERY 1' UNLESS PRECLUDED BY A ROCK
WHEN MORE THAN 1 BIOROLL/COMPOST LOG IS NEEDED, OVERLAP ENDS A MINIMUM OF 6" AND STAKE
WOOD STAKES ARE DRIVEN THROUGH BACK HALF OF BIOROLL OR COMPOST LOG AT 45° ANGLE WITH TOP OF STAKE POINTING UPHILL

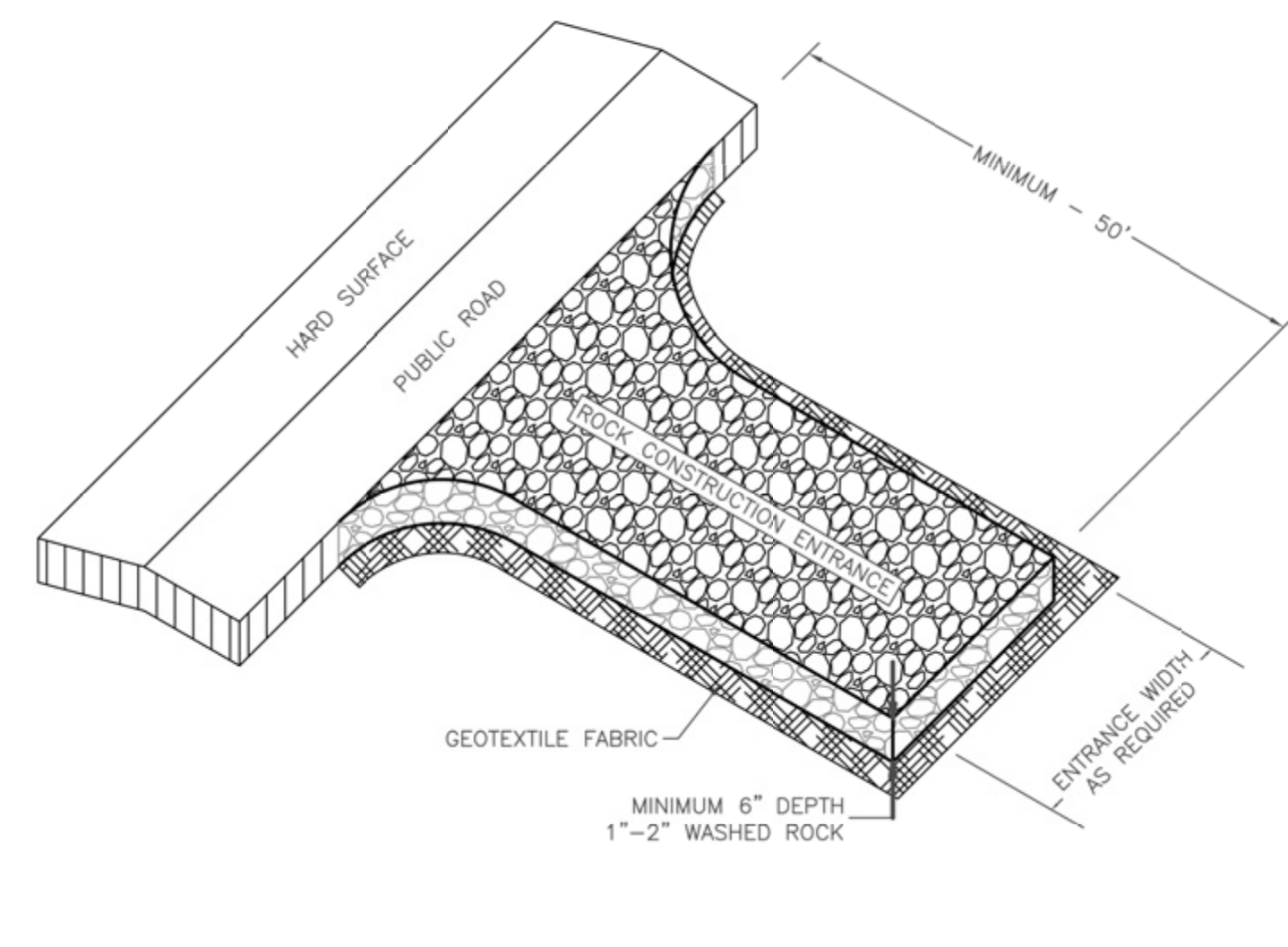
APPROVED:
3 - 2016



CITY PLATE No. ERO-4

STANDARD DETAILS:
BIO ROLL (COMPOST LOG)

FOR REFERENCE ONLY



HARD SURFACE

PUBLIC ROAD

MINIMUM - 50'

MINIMUM CONSTRUCTION ENTRANCE

GEOTEXTILE FABRIC

MINIMUM 6" DEPTH 1"-2" WASHED ROCK

ENTRANCE WIDTH AS REQUIRED

NOT TO SCALE

NOTE:
1. MINIMUM CONSTRUCTION ENTRANCE WIDTH EQUAL TO PROPOSED ROADWAY WIDTH.
2. WIDTH OF RADIUS AS REQUIRED TO ENSURE VEHICLES DO NOT TRACK ONTO PUBLIC ROAD.
3. MAINTAINENCE AS REQUIRED TO PREVENT TRACKING ONTO PUBLIC ROADS. THIS MAY REQUIRE TOP DRESSING WITH ADDITIONAL ROCK OR REMOVAL AND REINSTALLATION OF THE ENTRANCE AS NEEDED.

APPROVED:
1 - 2016



CITY PLATE No. ERO-5

STANDARD DETAILS:
ROCK CONSTRUCTION ENTRANCE

FOR REFERENCE ONLY

Notes:

- INSTALLATION OF 4" OF TOPSOIL REQUIRED ACROSS ALL DISTURBED AREAS.
- TOPSOIL IS DEFINED AS BLACK DIRT COMPOSED OF UNCONSOLIDATED MATERIAL, LARGELY UNDECOMPOSED ORGANIC MATTER WHICH IS SUITABLE FOUNDATION FOR VEGETATIVE GROWTH.
- THE COMPOSITION OF TOPSOIL SHOULD CONTAIN NO MORE THAN THIRTY-FIVE PERCENT (35%) SAND CONTENT.

APPROVED:
7 - 2019



CITY PLATE No. ERO-6

STANDARD DETAILS:
TOPSOIL REQUIREMENTS

PRELIMINARY - NOT FOR CONSTRUCTION

RAMSEY SPEC
INDUSTRIAL
PREPARED FOR
OPPIDAN
HOLDINGS LLC

EROSION AND
SEDIMENT
CONTROL DETAILS

MN

KHA PROJECT
160774051

DATE
05/06/2021

SCALE
AS SHOWN

DESIGNED BY
CUJ

DRAWN BY
KAM

CHECKED BY
MCB

Kimley»Horn

2021 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-445-4197
WWW.KIMLEY-HORN.COM

REVISIONS

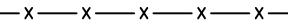
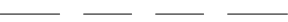
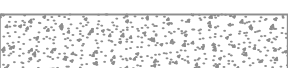
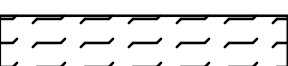
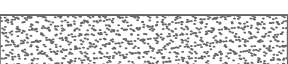
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SHEET NUMBER
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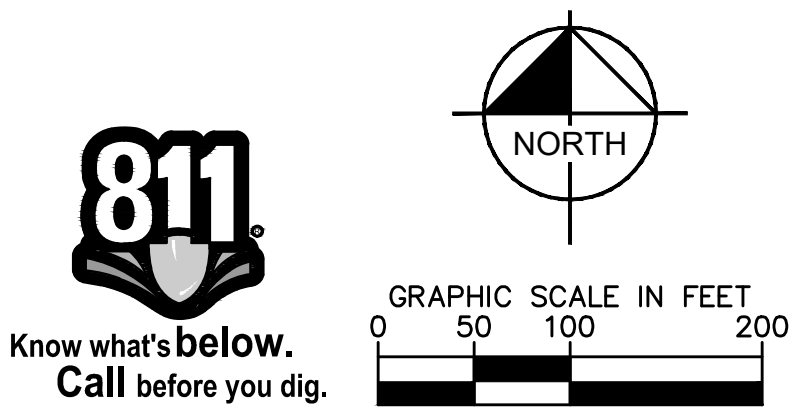
BUILDING #3	
INDUSTRIAL REQUIRED PARKING (85% GFA = 124,950 SF)	125 SPACES @ 1/1000 SF
OFFICE REQUIRED PARKING (15% GFA = 22,050 SF)	74 SPACES @ 1/300 SF
TOTAL REQUIRED PARKING	199 SPACES
PROPOSED PARKING	216 SPACES
ADA STALLS REQ'D / PROVIDED	7 STALLS / 10 STALLS

LEGEND

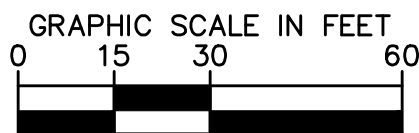
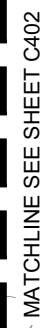
- | | |
|---|-------------------------------------|
|  | PROPERTY LINE |
|  | PROPOSED FENCE |
|  | SETBACK LINE |
|  | RETAINING WALL |
|  | PROPOSED CURB AND GUTTER |
|  | PROPOSED HEAVY DUTY ASPHALT |
|  | PROPOSED STANDARD DUTY ASPHALT |
|  | PROPOSED CONCRETE PAVEMENT |
|  | PROPOSED STORMWATER MANAGEMENT AREA |
|  | PROPOSED CONCRETE SIDEWALK |

SITE PLAN NOTES

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8. KIMLEY-HORN ASSUMES NO LIABILITY FOR ANY ERRORS, INACCURACIES, OR OMISSIONS CONTAINED THEREIN.
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17. ALL PARKING STALLS TO BE 9' IN WIDTH AND 18' IN LENGTH UNLESS OTHERWISE INDICATED.
18. THERE ARE 0.00 ACRES OF WETLAND IMPACTS.

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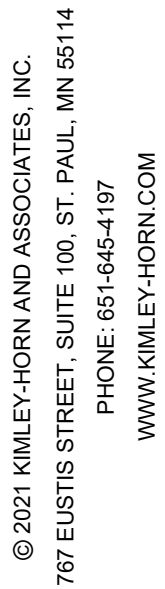
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	PROPERTY LINE
	PROPOSED FENCE
	SETBACK LINE
	RETAINING WALL
	PROPOSED CURB AND GUTTER
	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED STANDARD DUTY ASPHALT
	PROPOSED CONCRETE PAVEMENT
	PROPOSED STORMWATER MANAGEMENT AREA
	PROPOSED CONCRETE SIDEWALK

(A)	CONCRETE SIDEWALK
(B)	6" CONCRETE FILLED PIPE BOLLARD
(C)	MATCH EXISTING EDGE OF PAVEMENT/ CURB & GUTTER
(D)	ACCESSIBLE CURB RAMP
(E)	ACCESSIBLE PARKING SIGN
(F)	ACCESSIBLE PARKING
(G)	AREA STRIPED WITH 4" SYSL @ 45° 2' O.C.
(H)	STANDARD DUTY ASPHALT PAVEMENT
(I)	LANDSCAPE AREA - SEE LANDSCAPE PLANS
(J)	MILL AND OVERLAY RESTRIPPED AREAS
(K)	HEAVY DUTY CONCRETE PAVEMENT
(L)	B612 CURB & GUTTER (TYP.)
(M)	TRANSITION CURB
(N)	FLAT CURB
(O)	COMMERCIAL DRIVEWAY APRON

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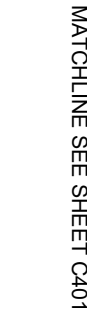
KHA PROJECT		I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	
160774051	DATE	05/06/2021	
SCALE AS SHOWN			
DESIGNED BY	XXX		
DRAWN BY	XXX		
CHECKED BY	XXX		
DATE:	XXXXXX/XXXX/XX	MY	XXXXXX
		FIRST M. LAST	

SITE PLAN

**RAMSEY SPEC
INDUSTRIAL
PREPARED FOR
OPPIDAN
HOLDINGS LLC**

SHEET NUMBER
C401

PRELIMINARY - NOT FOR CONSTRUCTION



EXISTING KNOWN
WETLAND AREA

PROPOSED TRAIL ———

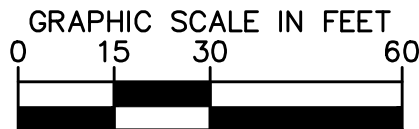
EX. TRAIL EASEMENT ———

MATCHLINE SEE SHEET C404

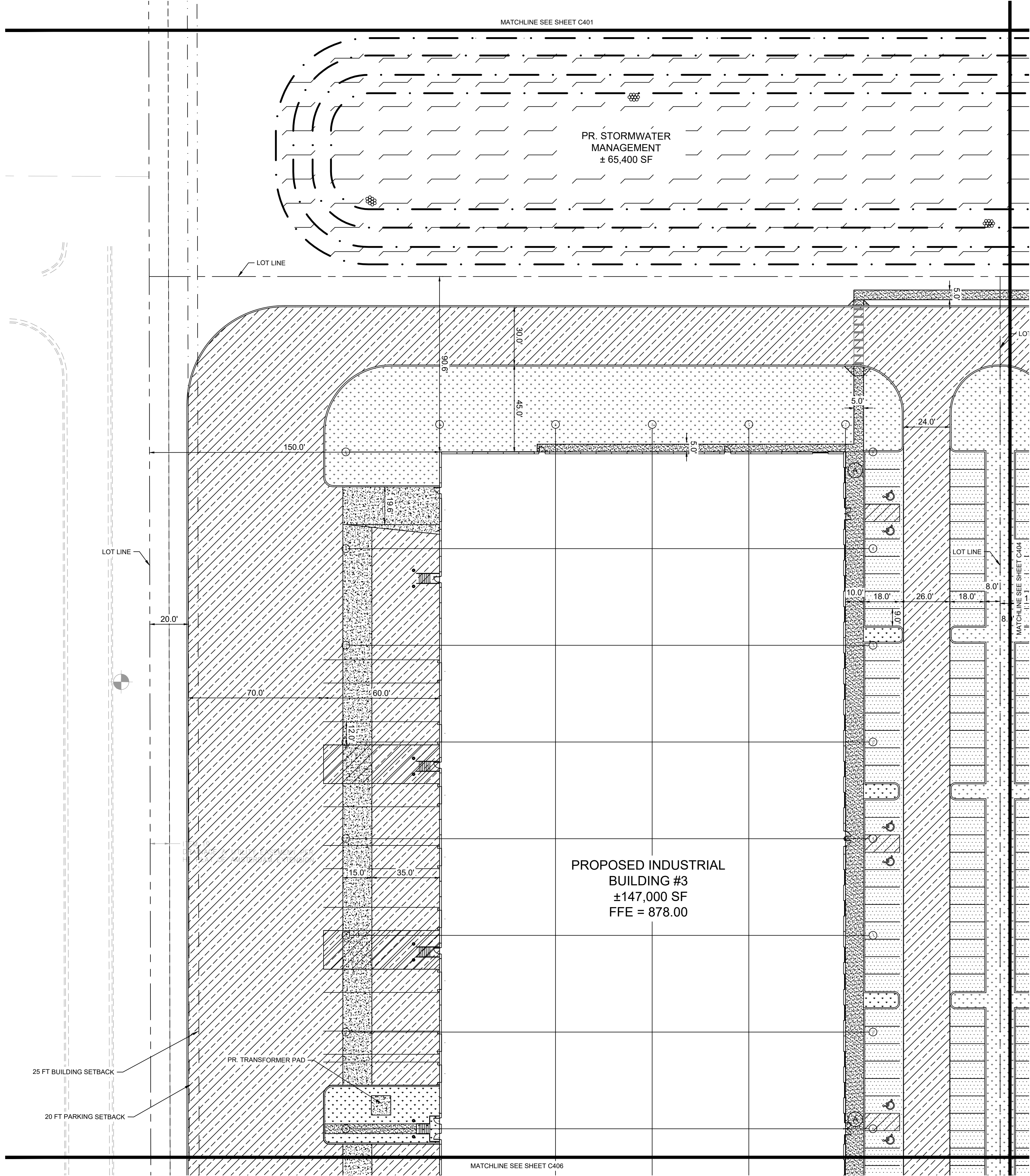
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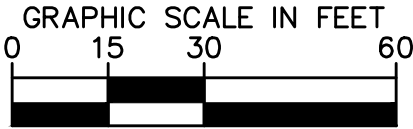
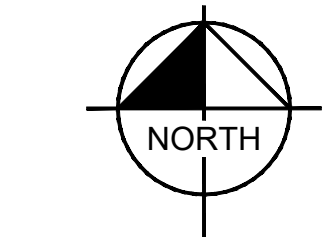
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16. ALL PARKING STALLS TO BE 9' IN WIDTH AND 18' IN LENGTH UNLESS OTHERWISE INDICATED.
17. THERE ARE 0.00 ACRES OF WETLAND IMPACTS.



SHEET NUMBER		RAMSEY	
RAMSEY SPEC INDUSTRIAL PREPARED FOR OPPIDAN HOLDINGS LLC		MN	
SITE PLAN			
KHA PROJECT 1607740351		I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	
DATE 05/06/2021		FIRST M. LAST	
SCALE AS SHOWN		DATE: ____/____/____ MN LIC. NO. _____	
DESIGNED BY XXX		_____	
DRAWN BY XXX		_____	
CHECKED BY XXX		_____	
		© 2021 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE: 651-455-4197 WWW.KIMLEY-HORN.COM	
		Kimley»Horn	
		No.	
		REVISIONS	
		DATE	
		BY	



Know what's below.
Call before you dig.



LEGEND

	PROPERTY LINE
	PROPOSED FENCE
	SETBACK LINE
	RETAINING WALL
	PROPOSED CURB AND GUTTER
	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED STANDARD DUTY ASPHALT
	PROPOSED CONCRETE PAVEMENT
	PROPOSED STORMWATER MANAGEMENT AREA
	PROPOSED CONCRETE SIDEWALK

KEYNOTE LEGEND

(A)	CONCRETE SIDEWALK
(B)	6" CONCRETE FILLED PIPE BOLLARD
(C)	MATCH EXISTING EDGE OF PAVEMENT/ CURB & GUTTER
(D)	ACCESSIBLE CURB RAMP
(E)	ACCESSIBLE PARKING SIGN
(F)	ACCESSIBLE PARKING
(G)	AREA STRIPED WITH 4" SYSL @ 45° 2' O.C.
(H)	STANDARD DUTY ASPHALT PAVEMENT
(I)	LANDSCAPE AREA - SEE LANDSCAPE PLANS
(J)	MILL AND OVERLAY RESTRIPPED AREAS
(K)	HEAVY DUTY CONCRETE PAVEMENT
(L)	B612 CURB & GUTTER (TYP.)
(M)	TRANSITION CURB
(N)	FLAT CURB
(O)	COMMERCIAL DRIVEWAY APRON

SITE PLAN NOTES

- ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
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- ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
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- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES REQUIREMENTS AND PROJECT SITE WORK SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
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KIMLEY-HORN ASSUMES NO LIABILITY FOR ANY ERRORS, INACCURACIES, OR OMISSIONS CONTAINED THEREIN.
- TOTAL LAND AREA IS 43.57 ACRES.
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PRELIMINARY - NOT FOR CONSTRUCTION

**RAMSEY SPEC
INDUSTRIAL**
PREPARED FOR
**OPPIDAN
HOLDINGS LLC**

SITE PLAN

KHA PROJECT
160774051
DATE
05/06/2021
SCALE
AS SHOWN
DESIGNED BY
XXX
DRAWN BY
XXX
CHECKED BY
XXX

LICENSURE CERTIFICATE NO. 15433-0001
I HEREBY CERTIFY THAT THIS PLAN
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.

FIRST M. LAST
DATE: XXX/XXX/XXX MN LIC. NO. XXXX

Kimley»Horn

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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-845-4197
WWW.KIMLEY-HORN.COM

No.	REVISIONS	DATE	BY

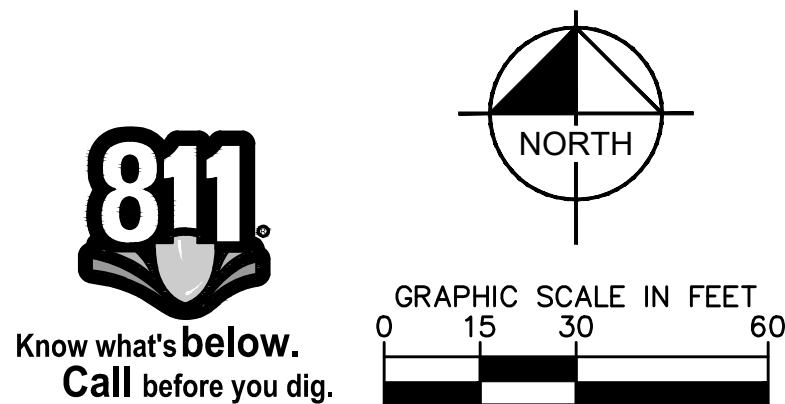
SHEET NUMBER
C403



	PROPERTY LINE
	PROPOSED FENCE
	SETBACK LINE
	RETAINING WALL
	PROPOSED CURB AND GUTTER
	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED STANDARD DUTY ASPHALT
	PROPOSED CONCRETE PAVEMENT
	PROPOSED STORMWATER MANAGEMENT AREA
	PROPOSED CONCRETE SIDEWALK

(A)	CONCRETE SIDEWALK
(B)	6" CONCRETE FILLED PIPE BOLLARD
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(E)	ACCESSIBLE PARKING SIGN
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FIRST M. LAST
MN

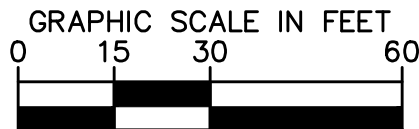
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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

[illegible]

KEYNOTE LEGEND

- ## SITE PLAN NOTES

- 



SHEET NUMBER		C405		RAMSEY SPEC INDUSTRIAL PREPARED FOR OPPIDAN HOLDINGS LLC		MIN	
KHA PROJECT		1607740351		DATE		05/06/2021	
SCALE		AS SHOWN		DESIGNED BY		XXX	
DRAWN BY		XXX		CHECKED BY		XXX	
FIRST M. LAST		DATE: _____		MN		LIC. NO. _____	
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PHONE: 651-454-1197		WWW.KIMLEY-HORN.COM		No.		REVISIONS	
DATE		BY					



PROPOSED INDUSTRIAL
BUILDING #1
±147,000 SF
FFE = 878.00

— 95 FT BUILDING SETBACK

PR. STORMWATER
MANAGEMENT
± 26,000 SF

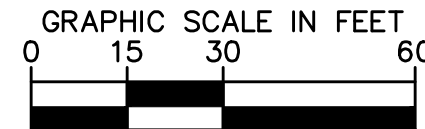
20 FT PARKING SETBACK -

BU

	PROPERTY LINE
	PROPOSED FENCE
	SETBACK LINE
	RETAINING WALL
	PROPOSED CURB AND GUTTER
	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED STANDARD DUTY ASPHALT
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(E)	ACCESSIBLE PARKING SIGN
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PRELIMINARY - NOT FOR CONSTRUCTION	SHEET NUMBER C406	RAMSEY SPEC INDUSTRIAL PREPARED FOR OPPIDAN HOLDINGS LLC RAMSEY MN	SITE PLAN	KHA PROJECT 160774051	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	 © 2021 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE 651-945-4197 WWW.KIMLEY-HORN.COM	No.	REVISIONS	DATE	BY
				DATE 05/06/2021						
				SCALE AS SHOWN						
				DESIGNED BY XXX	FIRST T.M. LAST					
				DRAWN BY XXX	MN DATE: XX/XX/XXXX LIC. NO. XXXXX					
				CHECKED BY XXX						

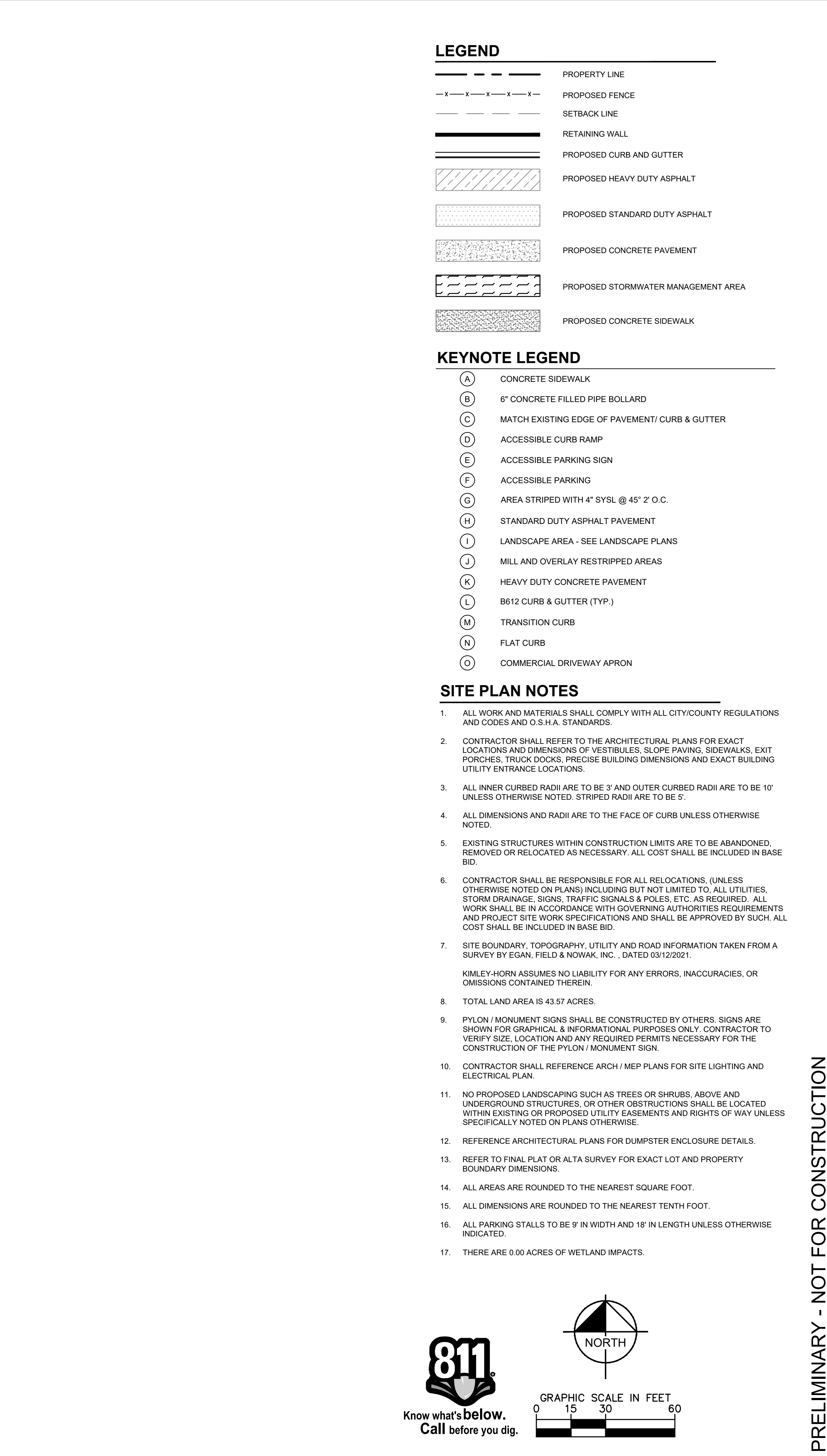


GRAPHIC SCALE IN FEET

0 15 30 60

SHEET NUMBER
C407

PRELIMINARY - NOT FOR CONSTRUCTION

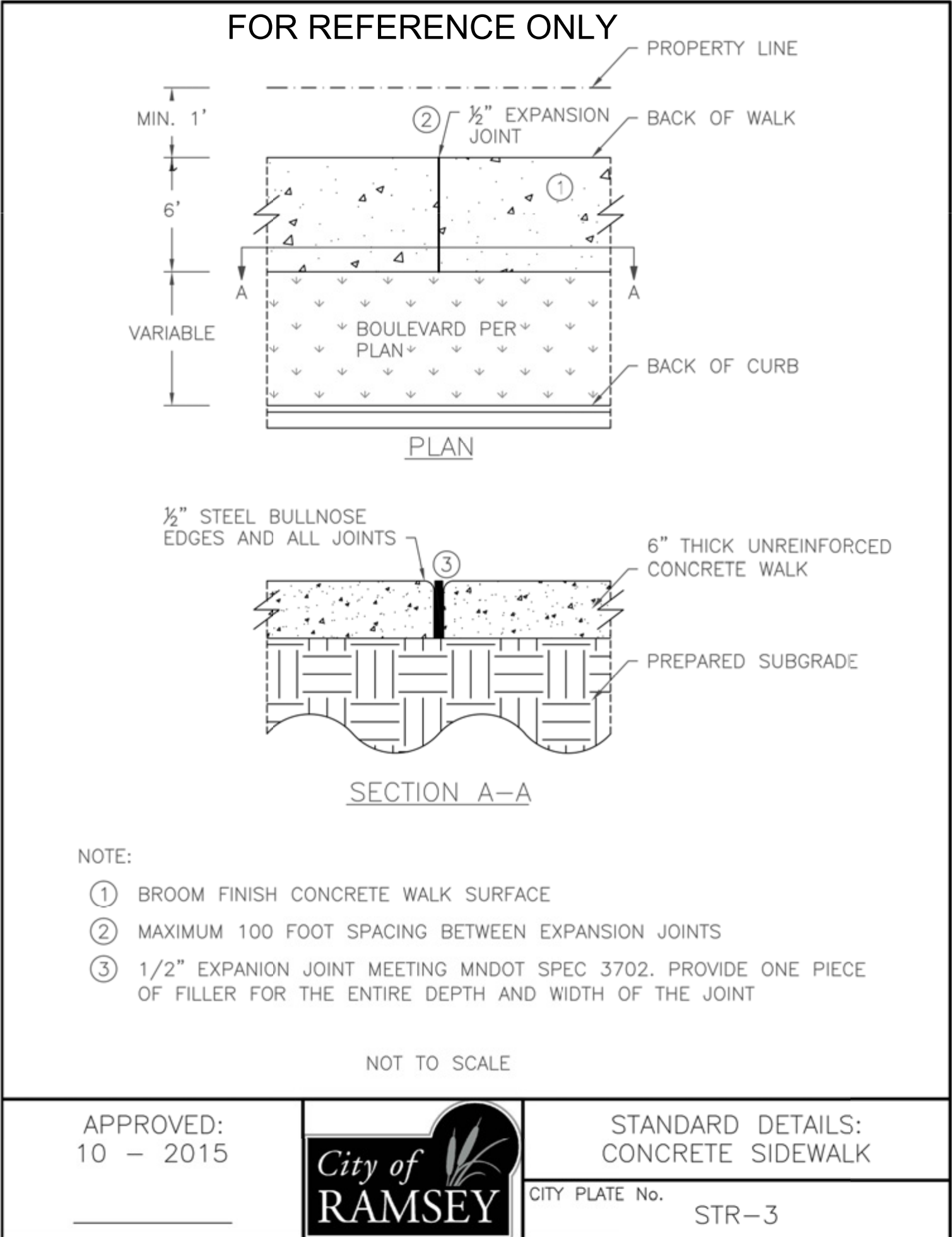
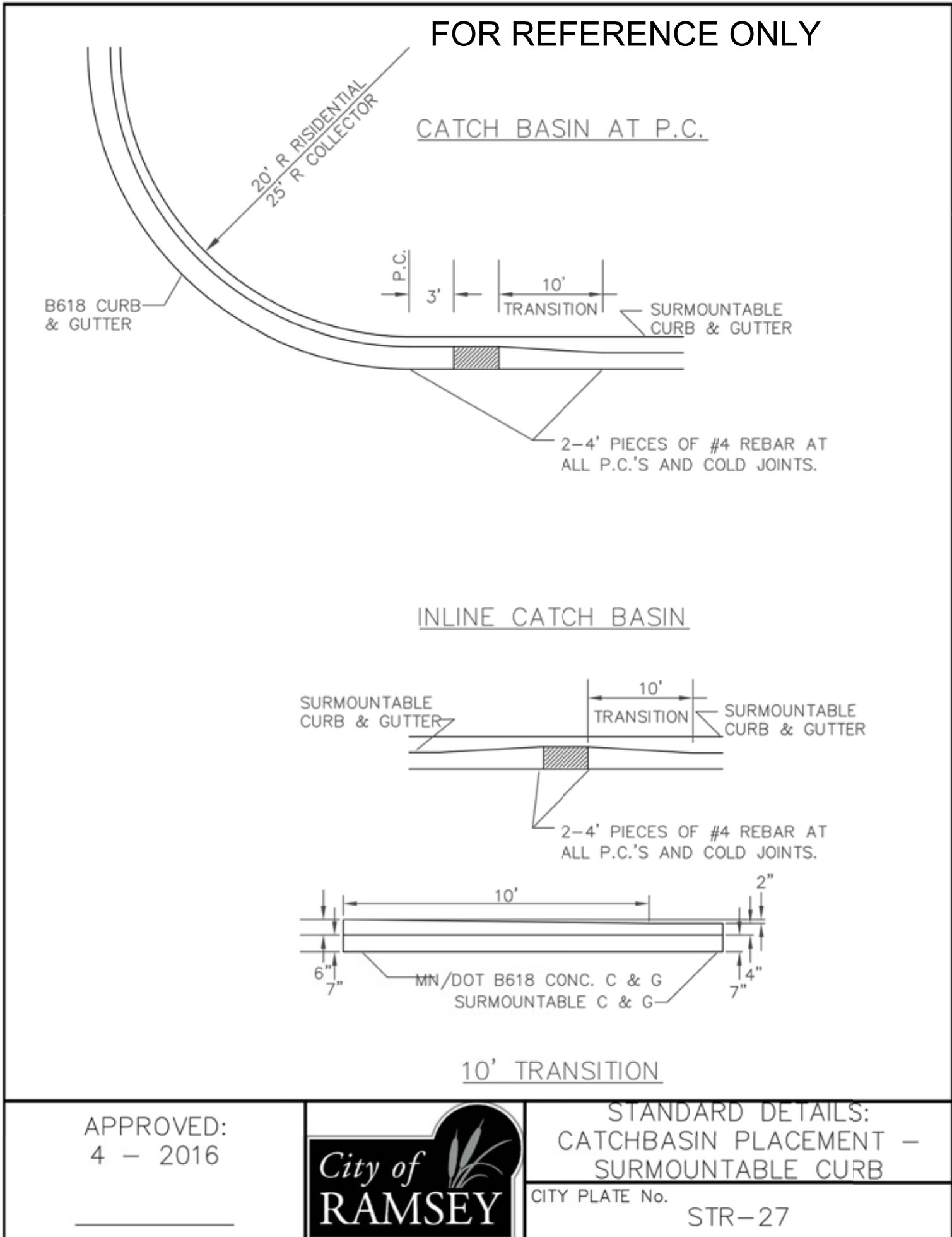
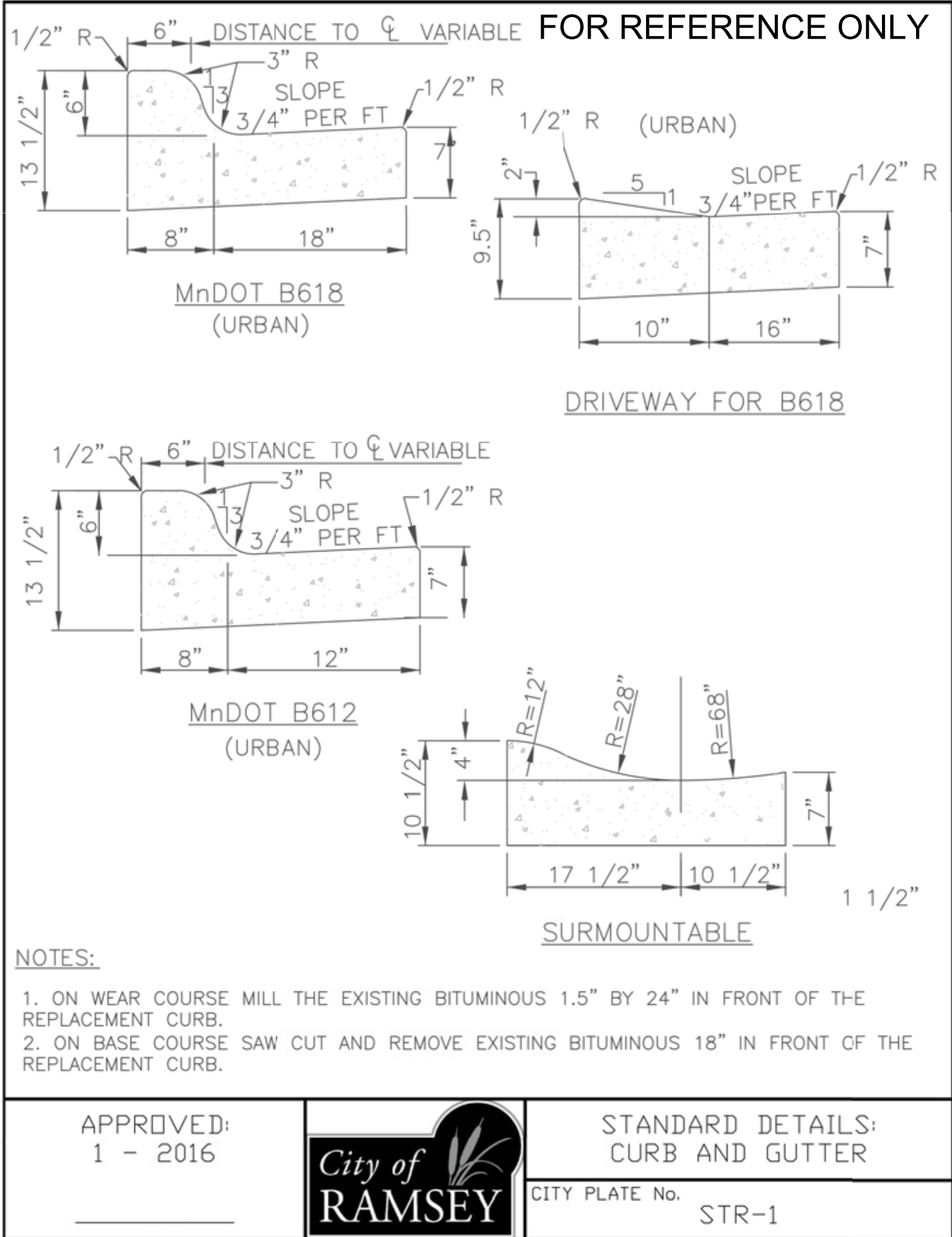
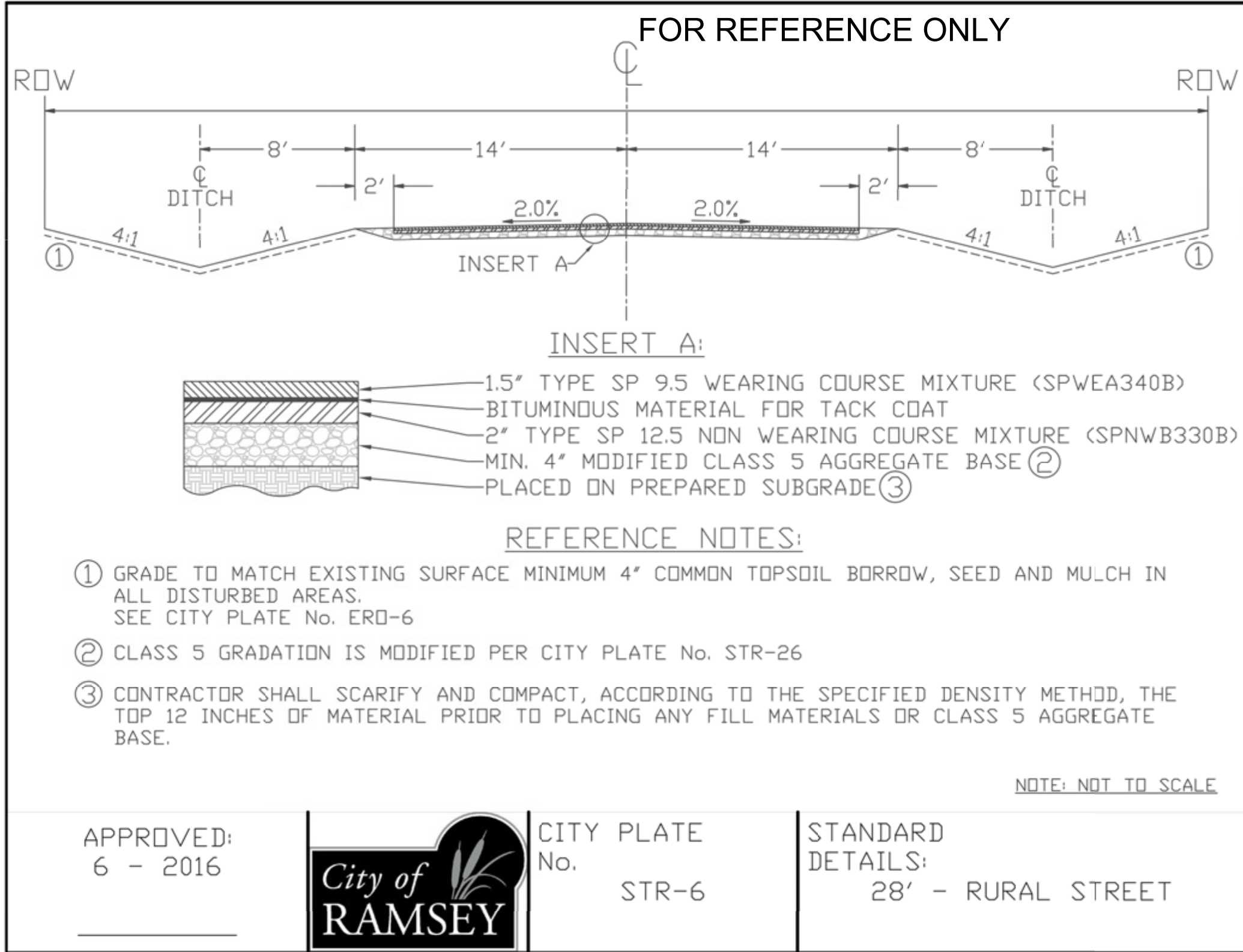
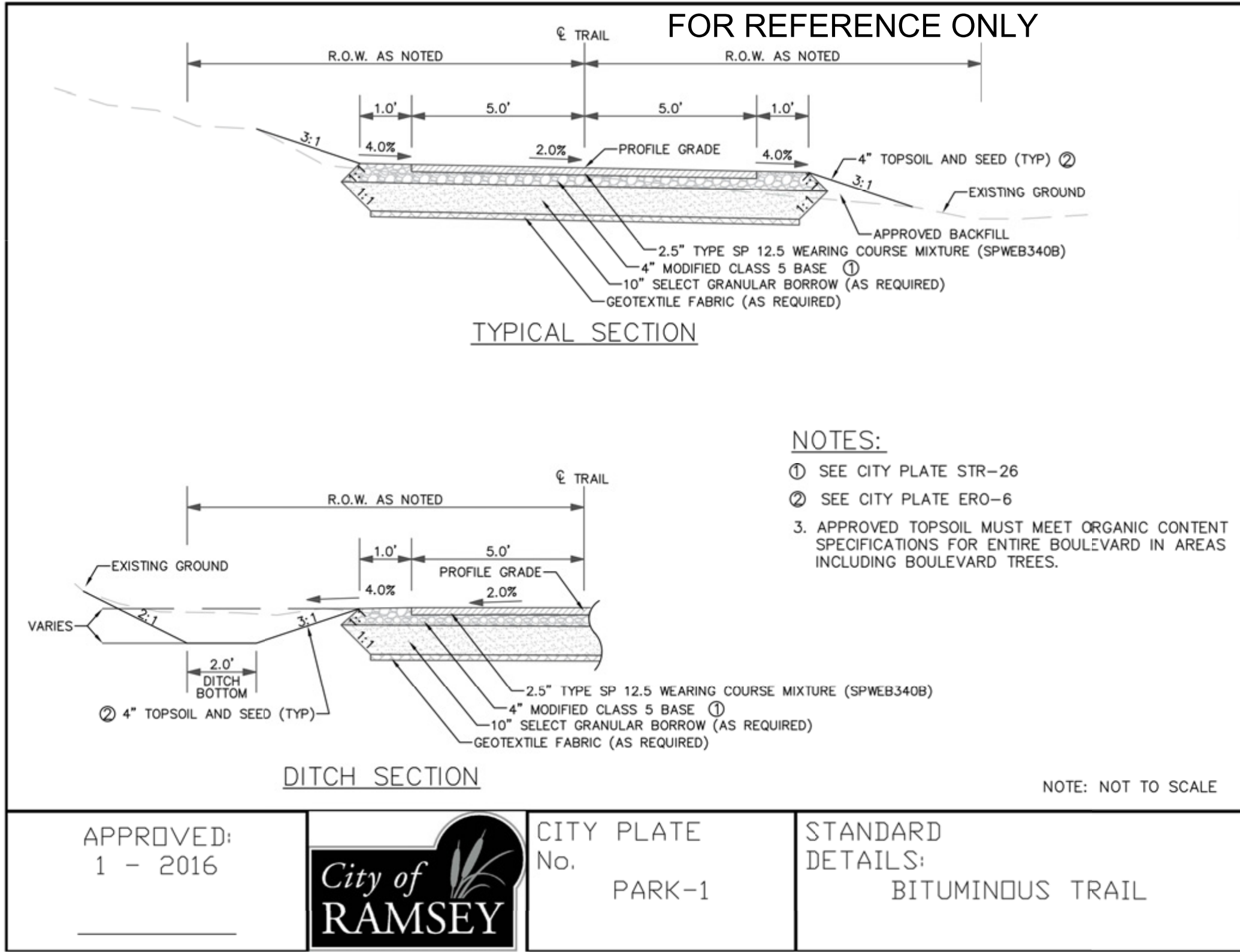


KEYNOTE LEGEND

- (A) CONCRETE SIDEWALK
- (B) 6" CONCRETE FILLED PIPE BOLLARD
- (C) MATCH EXISTING EDGE OF PAVEMENT/ CURB & GUTTER
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- (E) ACCESSIBLE PARKING SIGN
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- (G) AREA STRIPED WITH 4" SYSL @ 45° 2' O.C.
- (H) STANDARD DUTY ASPHALT PAVEMENT
- (I) LANDSCAPE AREA - SEE LANDSCAPE PLANS
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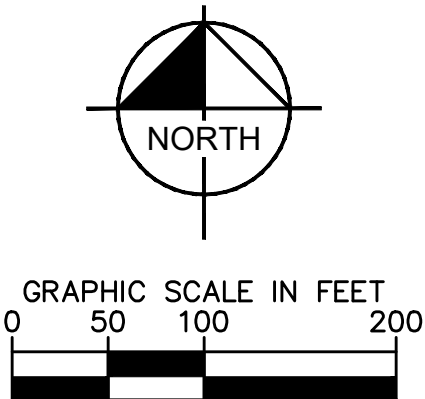
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RAMSEY SPEC INDUSTRIAL PREPARED FOR OPPIDAN HOLDINGS LLC						MINN					
SHEET NUMBER C408											
SITE PLAN											
KHA PROJECT 160774051		DATE 05/06/2021		SCALE AS SHOWN		DESIGNED BY XXX		DRAWN BY XXX		CHECKED BY XXX	
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.						© 2021 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE: 651-945-4197 WWW.KIMLEY-HORN.COM					
Kimley»Horn											
No.		REVISIONS		DATE		BY					



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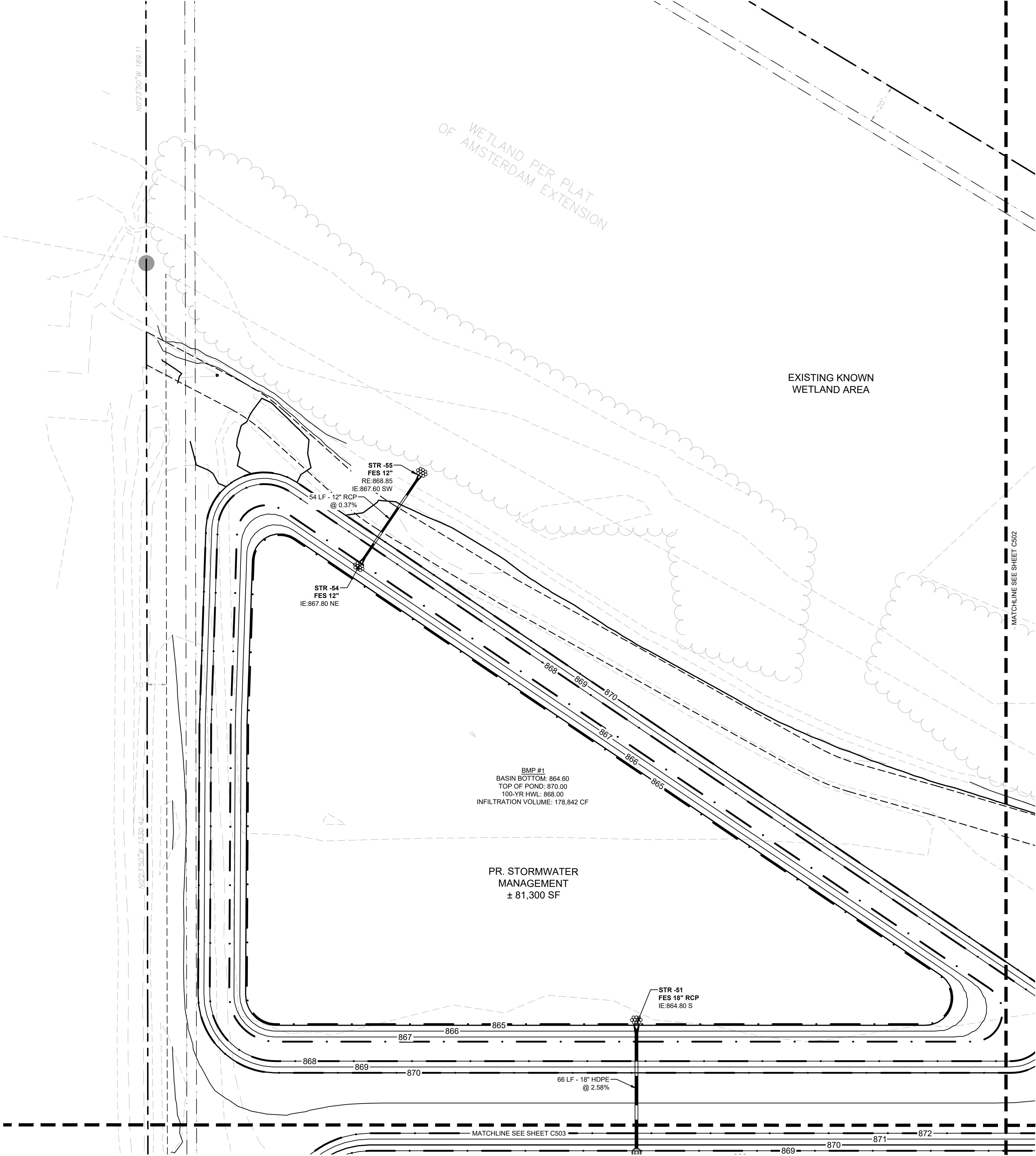
1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF RAMSEY, SPECIFICATIONS AND BUILDING PERMIT REQUIREMENTS.
2. CONTRACTOR TO CALL GOPHER STATE CALL ONE @ <1-800-252-1166> AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION/CONSTRUCTION FOR UTILITY LOCATIONS.
3. STORM SEWER PIPE SHALL BE AS FOLLOWS:
 - RCP PER ASTM C-76
 - HDPE: 0" - 10" PER AASHTO M-252
 - HDPE: 12" OR GREATER PER ASTM F-2306
 - PVC SCH. 40 PER ASTM D-1785
4. STORM SEWER FITTINGS SHALL BE AS FOLLOWS:
 - RCP PER ASTM C-76, JOINTS PER ASTM C-361, C-390, AND C-443
 - HDPE PER ASTM 3212
 - PVC PER ASTM D-3034, JOINTS PER ASTM D-3212
5. CONTRACTOR TO FIELD VERIFY THE LOCATIONS AND ELEVATIONS OR EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO THE START OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES OR VARIATIONS.
6. SUBGRADE EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AFTER EXCAVATION TO HELP OFFSET ANY STABILITY PROBLEMS DUE TO WATER SEEPAGE OR STEEP SLOPES. WHEN PLACING NEW SURFACE MATERIAL ADJACENT TO EXISTING PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING OF EXISTING PAVEMENT.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL.
8. CONTRACTOR SHALL EXCAVATE DRAINAGE TRENCHES TO FOLLOW PROPOSED STORM SEWER ALIGNMENTS.
9. GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL ROUGH GRADE TO SUBGRADE ELEVATION AND LEAVE STREET READY FOR SUBBASE.
10. ALL EXCESS MATERIAL, BITUMINOUS SURFACING, CONCRETE ITEMS, ANY ABANDONED UTILITY ITEMS, AND OTHER UNSTABLE MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE CONSTRUCTION SITE.
11. REFER TO THE UTILITY PLAN FOR SANITARY SEWER MAIN, WATER MAIN SERVICE LAYOUT AND ELEVATIONS AND CASTING / STRUCTURE NOTATION.
12. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF PAVEMENTS AND CURB AND GUTTER WITH SMOOTH UNIFORM SLOPES TO PROVIDE POSITIVE DRAINAGE.
13. INSTALL A MINIMUM OF 4" CLASS 5 AGGREGATE BASE UNDER CURB AND GUTTER AND CONCRETE SIDEWALKS.
14. UPON COMPLETION OF EXCAVATION AND FILLING, CONTRACTOR SHALL RESTORE ALL STREETS AND DISTURBED AREAS ON SITE. ALL DISTURBED AREAS SHALL BE RE-VEGETATED WITH A MINIMUM OF 4" OF TOPSOIL.
15. ALL SPOT ELEVATIONS/CONTOURS ARE TO GUTTER / FLOW LINE UNLESS OTHERWISE NOTED.
16. GRADING FOR ALL SIDEWALKS AND ACCESSIBLE ROUTES INCLUDING CROSSING DRIVEWAYS SHALL CONFORM TO CURRENT ADA STATE/NATIONAL STANDARDS. IN NO CASE SHALL ACCESSIBLE RAMP SLOPES EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPES EXCEED 2% . IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPES EXCEED 5% . IN NO CASE SHALL ACCESSIBLE PARKING STALLS OR AISLES EXCEED 2% (15% TARGET) IN ALL DIRECTIONS. SIDEWALK ACCESS TO EXTERNAL BUILDING DOORS AND GATES SHALL BE ADA COMPLIANT. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ADA CRITERIA CANNOT BE MET IN ANY LOCATION PRIOR TO PAVING. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA COMPLIANCE ISSUES.
17. MAINTAIN A MINIMUM OF 0.5% GUTTER SLOPE TOWARDS LOW POINTS.
18. CONTRACTOR TO PROVIDE 3" INSULATION BY 5' WIDE CENTERED ON STORM PIPE IF LESS THAN 4" OF COVER IN PAVEMENT AREAS AND LESS THAN 3" OF COVER IN LANDSCAPE AREAS.
19. ROOF DRAIN INVERT CONNECTIONS AT THE BUILDING SHALL BE AT ELEVATION 87.00 OR LOWER UNLESS NOTED OTHERWISE. REFERENCE MEP PLANS FOR ROOF DRAIN CONNECTION.
20. ALL STORM SEWER CONNECTIONS SHALL BE GASKETED AND WATER TIGHT INCLUDING MANHOLE CONNECTIONS.
21. ALL STORM SEWER PIPE SHALL BE AIR TESTED IN ACCORDANCE WITH THE CURRENT PLUMBING CODE.
22. MAINTAIN A MINIMUM OF 1.25% SLOPE IN BITUMINOUS PAVEMENT AREAS, 0.5% SLOPE IN CONCRETE PAVEMENT AREAS.
23. CONTRACTOR SHALL REVIEW PAVEMENT GRADIENT AND CONSTRUCT "INFALL CURB" WHERE PAVEMENT DRAINS TOWARD GUTTER, AND "OUTFALL" CURB WHERE PAVEMENT DRAINS AWAY FROM GUTTER.



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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

No.	REVISIONS	DATE	BY
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KEYNOTE LEGEND

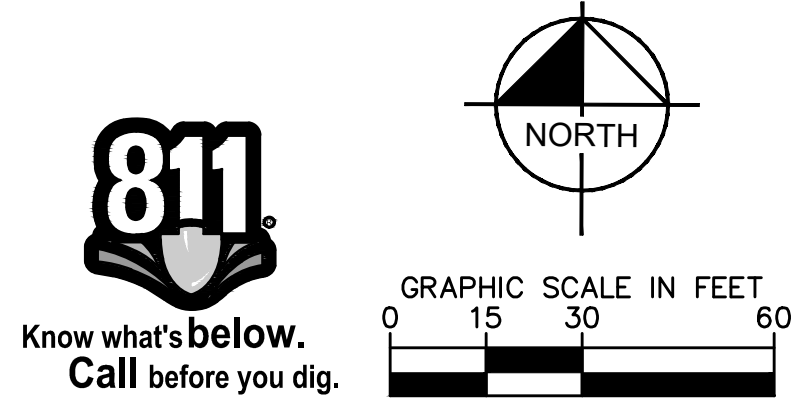
- (A) CORE DRILL AND CONNECT TO EXISTING STRUCTURE
- (B) CONNECT TO EXISTING STORM SERVICE
- (C) CONSTRUCT MANHOLE OVER EXISTING STORM SEWER
- (D) ADJUST EXISTING CASTING TO NEW RIM ELEVATION
- (E) ROOF DRAIN CONNECTION
- (F) REPLACE INLET WITH SOLID CASTING
- (G) -- NOT USED --

LEGEND

- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM MANHOLE (SOLID CASTING)
- PROPOSED STORM MANHOLE (ROUND INLET CASTING)
- PROPOSED STORM MANHOLE/ CATCH BASIN (CURB INLET CASTING)
- PROPOSED STORM SEWER CLENOUT
- PROPOSED FLARED END SECTION
- PROPOSED RIPRAP
- PROPOSED STORM SEWER
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- PROPOSED GUTTER ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- PROPOSED FLUSH PAVEMENT ELEVATION
- MATCH EXISTING ELEVATION
- PROPOSED EMERGENCY OVERFLOW
- PROPOSED DRAINAGE DIRECTION

GRADING PLAN NOTES

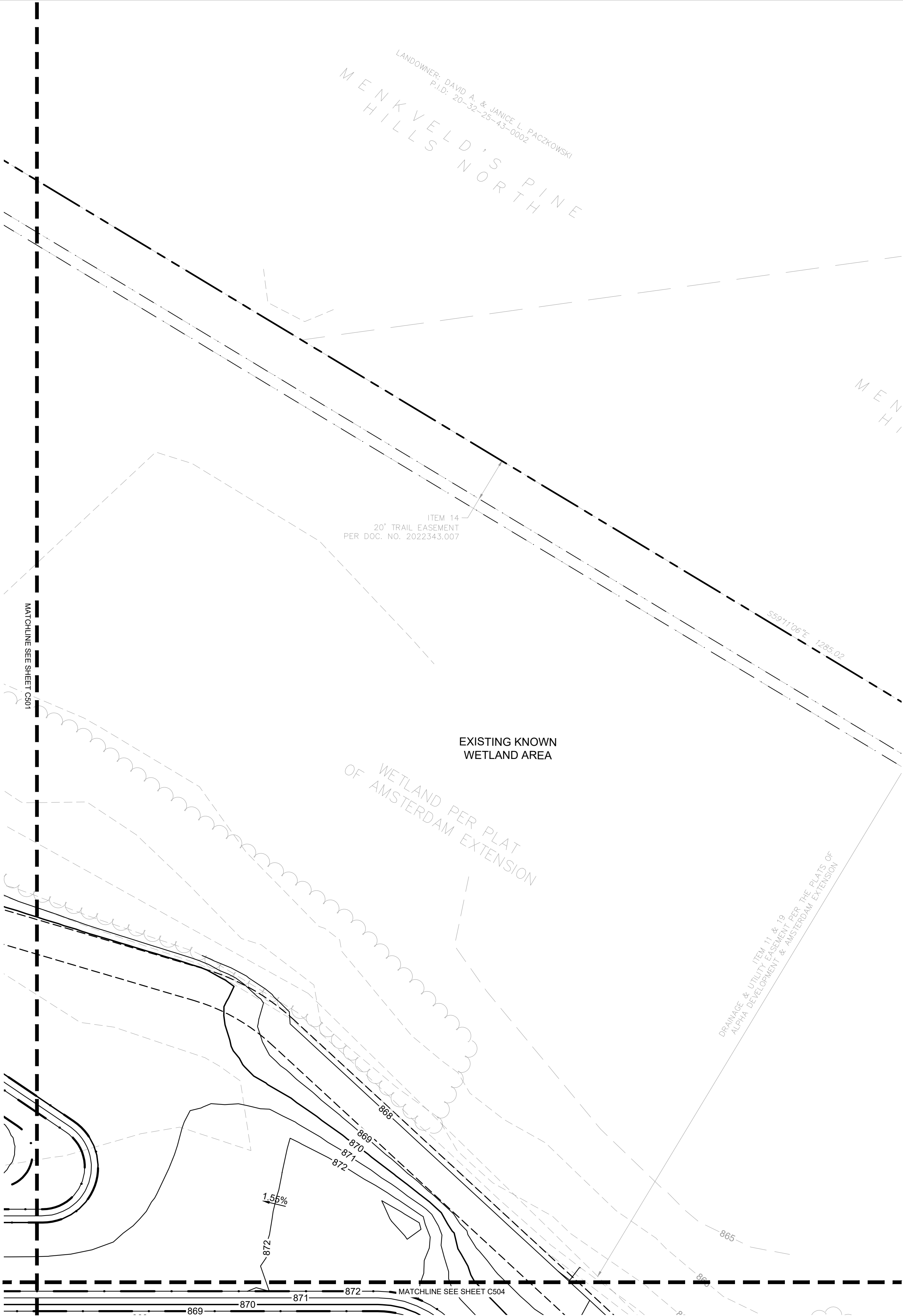
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RCP PER ASTM C-76
HDPE: 0" - 10" PER AASHTO M-252
HDPE: 12" OR GREATER PER ASTM F-2306
PVC SCH. 40 PER ASTM D-1785
STORM SEWER FITTINGS SHALL BE AS FOLLOWS:
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- CONTRACTOR TO FIELD VERIFY THE LOCATIONS AND ELEVATIONS OR EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO THE START OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES OR VARIATIONS.
- SUBGRADE EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AFTER EXCAVATION TO HELP OFFSET ANY STABILITY PROBLEMS DUE TO WATER SEEPAGE OR STEEP SLOPES. WHEN PLACING NEW SURFACE MATERIAL ADJACENT TO EXISTING PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING OF EXISTING PAVEMENT.
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- CONTRACTOR SHALL EXCAVATE DRAINAGE TRENCHES TO FOLLOW PROPOSED STORM SEWER ALIGNMENTS.
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KHA PROJECT 160774051		KIMLEY-HORN		REVISIONS		BY	
DATE 05/06/2021		© 2021 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE: 651-845-4197 WWW.KIMLEY-HORN.COM				DATE	
SCALE AS SHOWN		DESIGNED BY CLJ					
DRAWN BY KAM		MICHAEL C. BRANDT MN LIC. NO. 4261					
CHECKED BY MCB		DATE 05/06/2021					
RAMSEY SPEC INDUSTRIAL		GRADING & STORMWATER					
PREPARED FOR OPPIDAN HOLDINGS LLC		PLAN					
SHEET NUMBER C501		RAMSEY					

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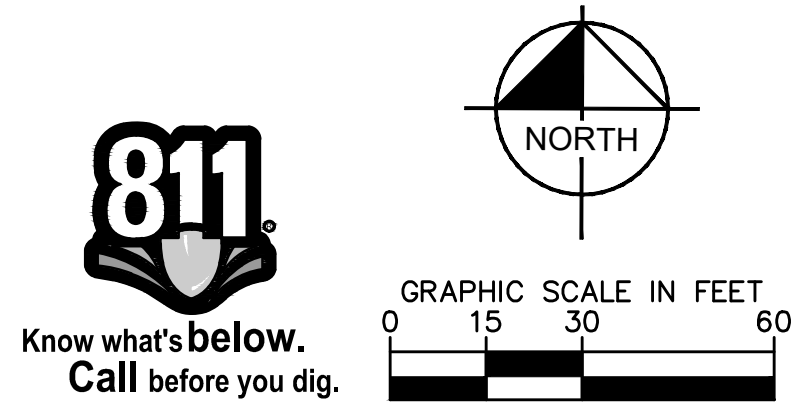
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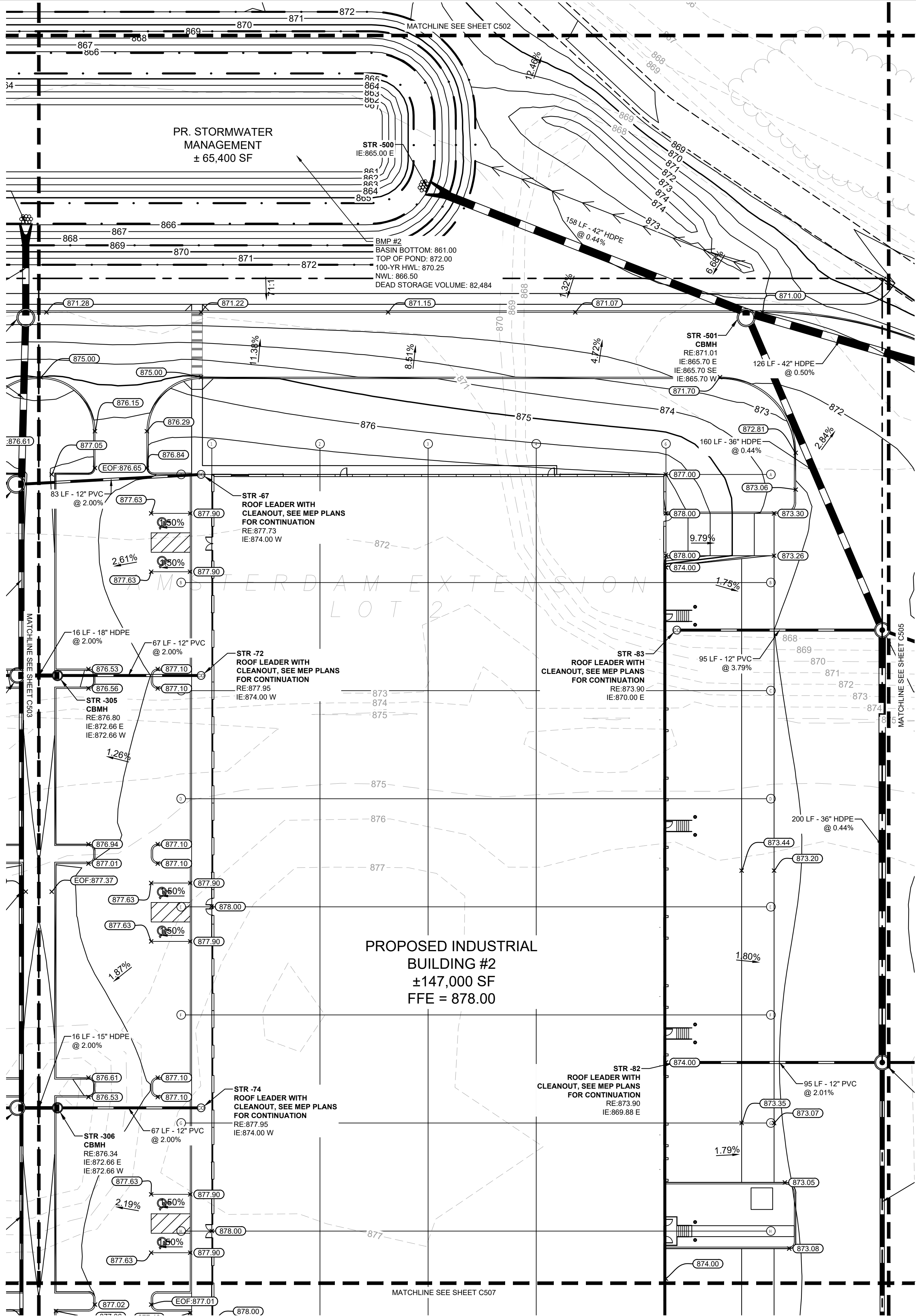


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DATE 05/06/2021		SCALE AS SHOWN		DESIGNED BY CUJ	
DRAWN BY KAM		CHECKED BY MCB		MICHAEL C. BRANDT MN LIC. NO. 4261	
DATE 05/06/2021		LIC. NO. 4261		DATE 05/06/2021	
BY		REVISIONS		BY	
No.		No.		No.	
C502		C502		C502	
SHEET NUMBER		SHEET NUMBER		SHEET NUMBER	
RAMSEY		RAMSEY		RAMSEY	
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SHEET NUMBER
C503

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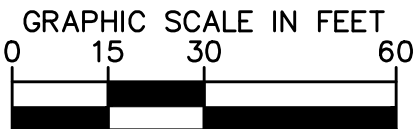
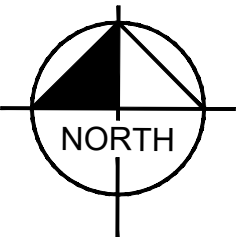
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PRELIMINARY - NOT FOR CONSTRUCTION

RAMSEY SPEC
INDUSTRIAL
PREPARED FOR
OPPIDAN
HOLDINGS LLC

GRADING &
STORMWATER
PLAN

KHA PROJECT
160774051
DATE
05/06/2021
SCALE
AS SHOWN
DESIGNED BY
CUJ
DRAWN BY
KAM
CHECKED BY
MCB

LICENSING CERTIFICATE NO. 1515, P.E. IN
MINNESOTA
SPECIFICATION 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 C. BRANDT
MN LIC. NO. 42681
DATE: 05/06/2021

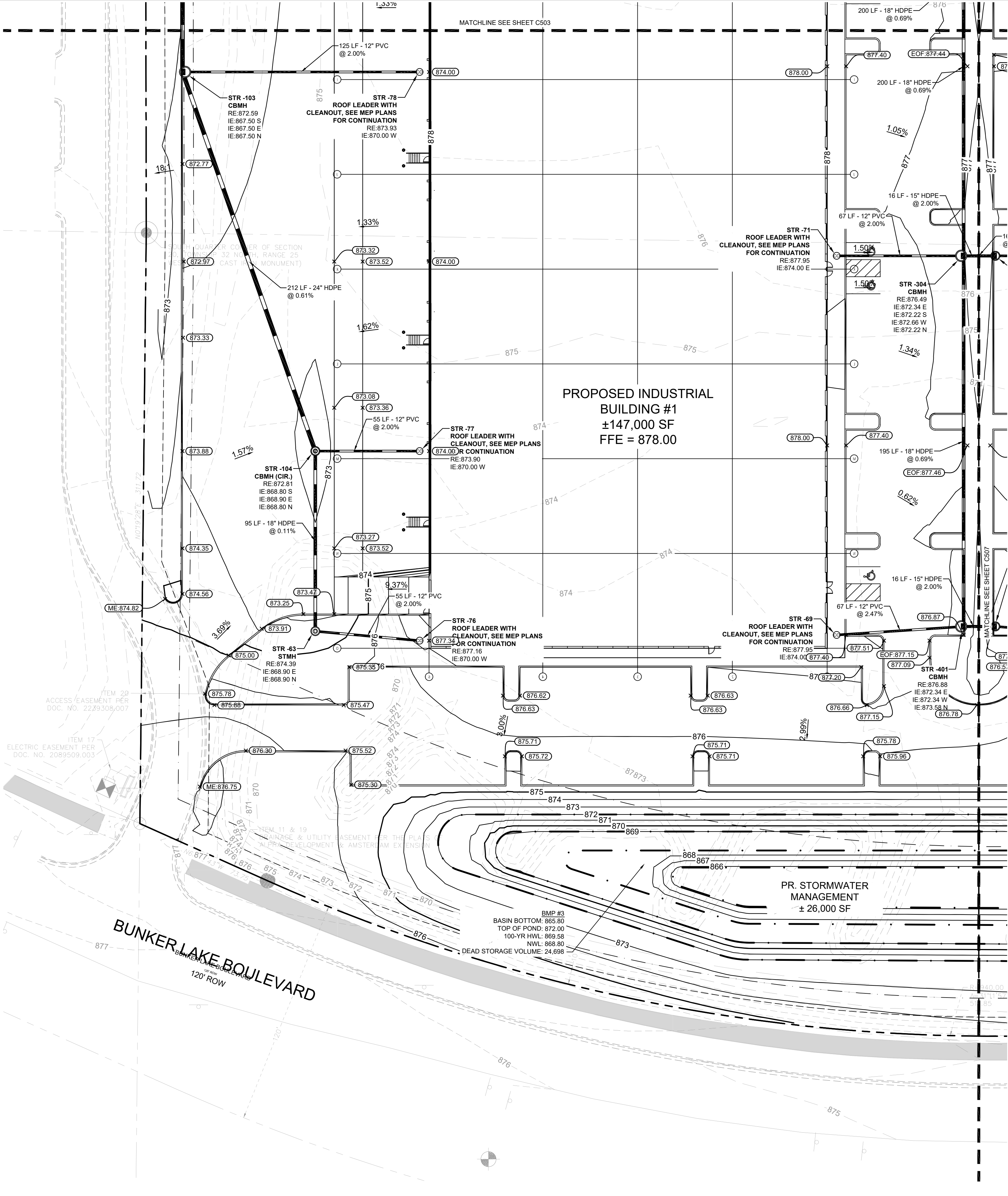
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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-945-4197
WWW.KIMLEY-HORN.COM

REVISIONS	DATE	BY
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SHEET NUMBER
C504

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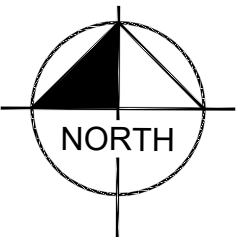
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GRAPHIC SCALE IN FEET
0 15 30 60

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GRADING &
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KHA PROJECT
160774051
DATE
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SCALE
AS SHOWN
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CLJ
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KAM
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MCB

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MICHAEL C. BRANDT
MN LIC. NO. 4261

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No.		

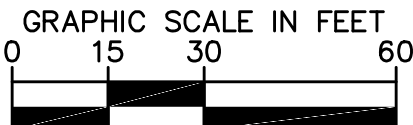
SHEET NUMBER
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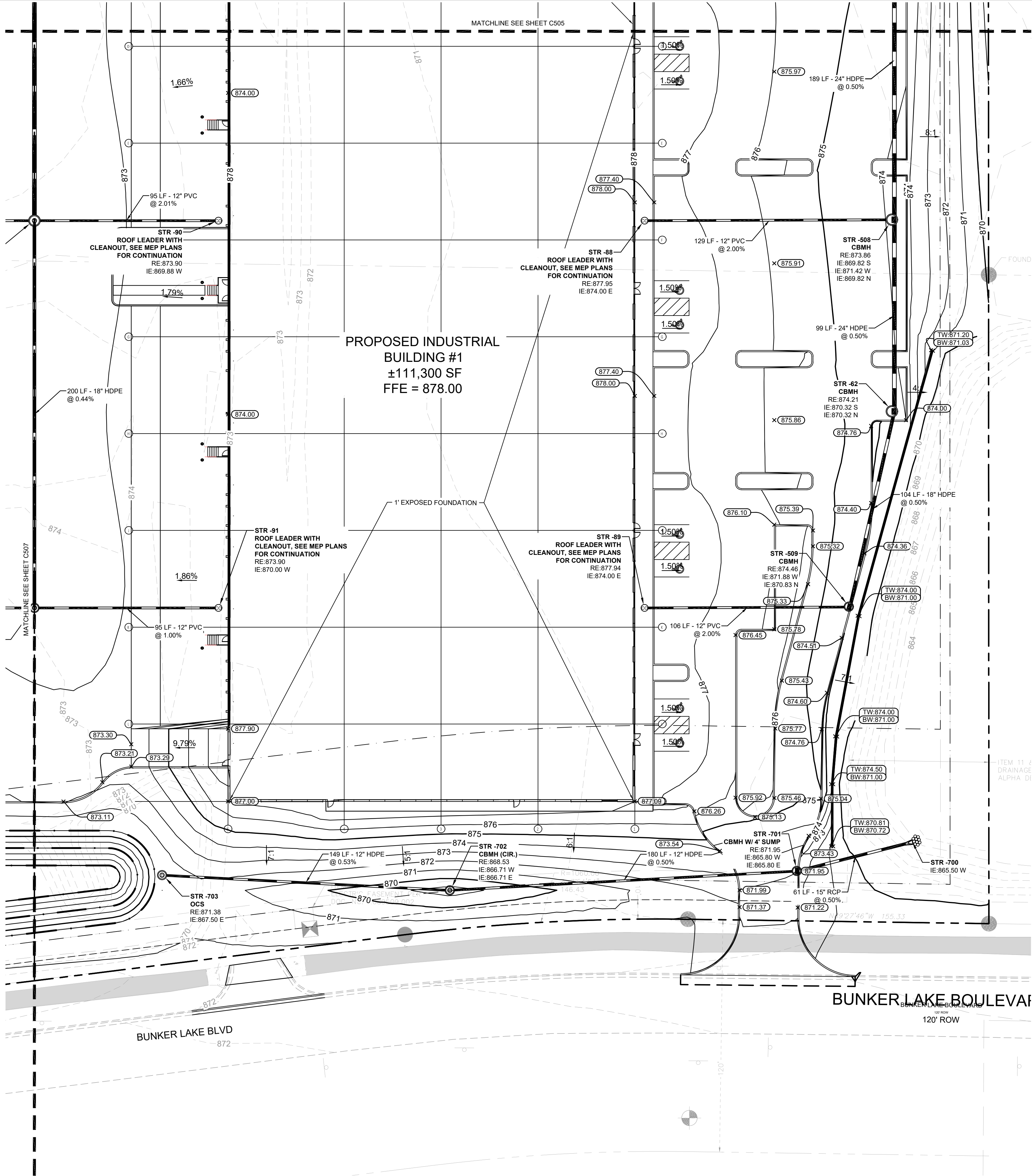
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[illegible]

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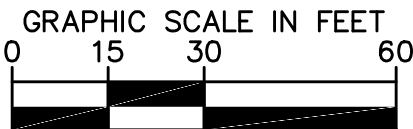
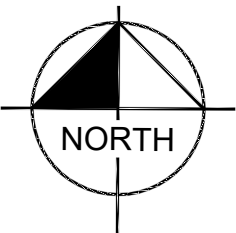
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STORMWATER
PLAN

THIS CERTIFICATE WAS PREPARED BY AN ENGINEER OR ARCHITECT OR PROFESSIONAL LANDSCAPE ARCHITECT OR PROFESSIONAL SURVEYOR OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER OR ARCHITECT OR PROFESSIONAL LANDSCAPE ARCHITECT OR PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

DESIGNED BY
DRAWN BY
CHECKED BY

CLJ
KAM
MCB

DATE: 05/06/2021

MIN. NO. 4261

MICHAEL C. BRANDT

Kimley»Horn

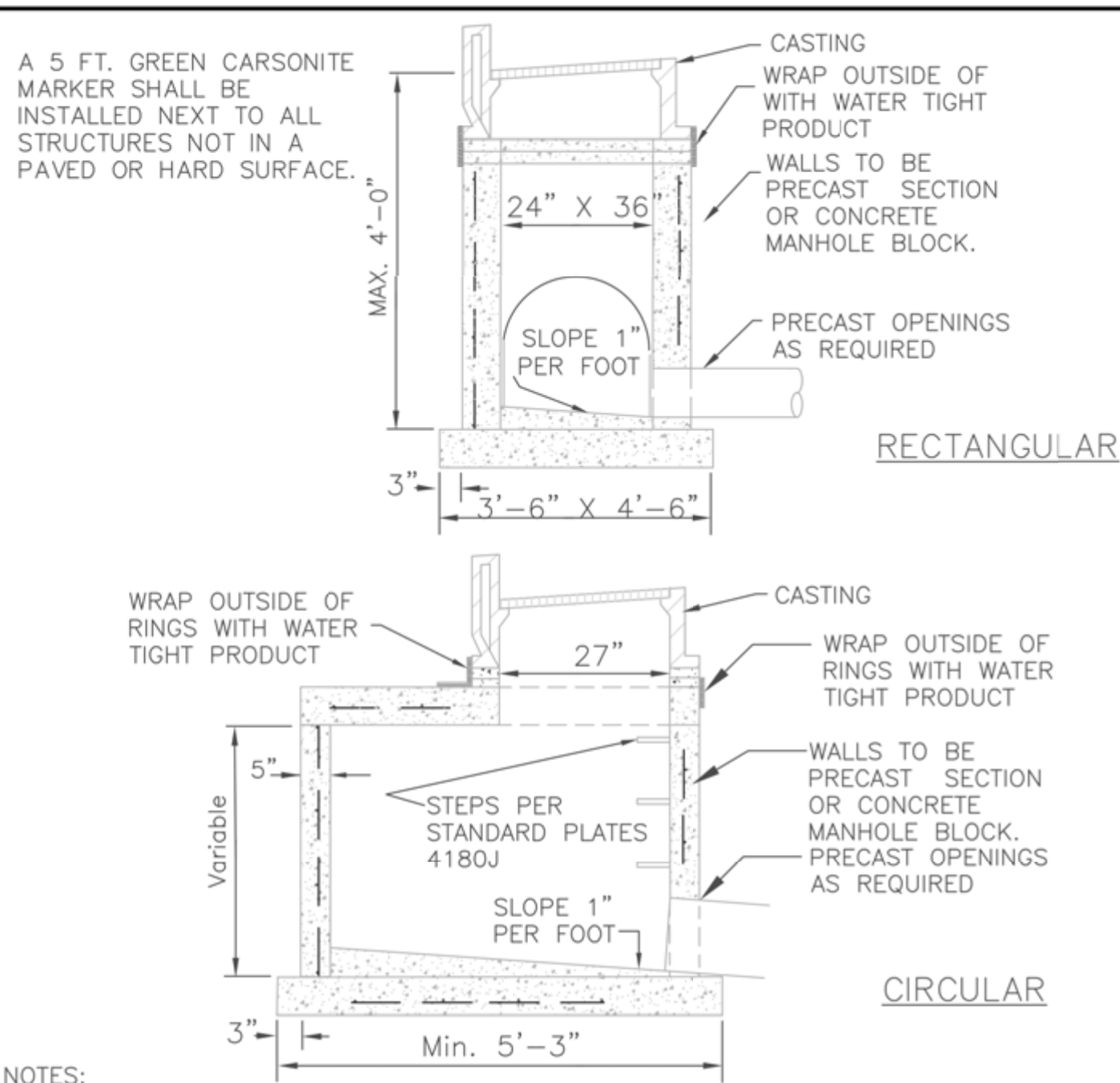
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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-845-4197
WWW.KIMLEY-HORN.COM

REVISIONS	DATE	BY
No.		

k:\TWC_LDEV\OPP\IDAN\Ramsey Industrial Bunker Lake Blvd3 Design\CAD\PlanSheets\C5-GRADING DETAILS.dwg May 06, 2021 - 11:48am

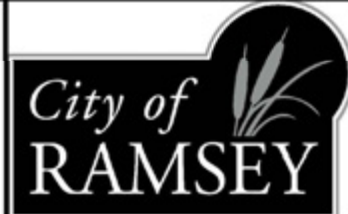
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FOR REFERENCE ONLY



- NOTES:
1. MANHOLE INVERT SHALL SLOPED TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET
 2. CONCRETE BASE SHALL BE 6" POURED IN PLACE OR 5" PRECAST SLAB.
 3. CONCRETE ADJUSTING RINGS TO BE INSTALLED MAX.7-2" RINGS, MIN 2-2" RINGS
 4. GROUT BETWEEN RINGS,SHIMS SHALL BE METAL, CONCRETE OR PLASTIC
 5. INSPECTION OF MANHOLE REQUIRED BEFORE BACKFILLING
 6. A 10 GAUGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL STORM LINES.
 7. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE
 8. STEPS ARE REQUIRED IF STRUCTURE FROM THE CASTING TO THE INVERT IS GREATER THAN 4 FEET
 9. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS

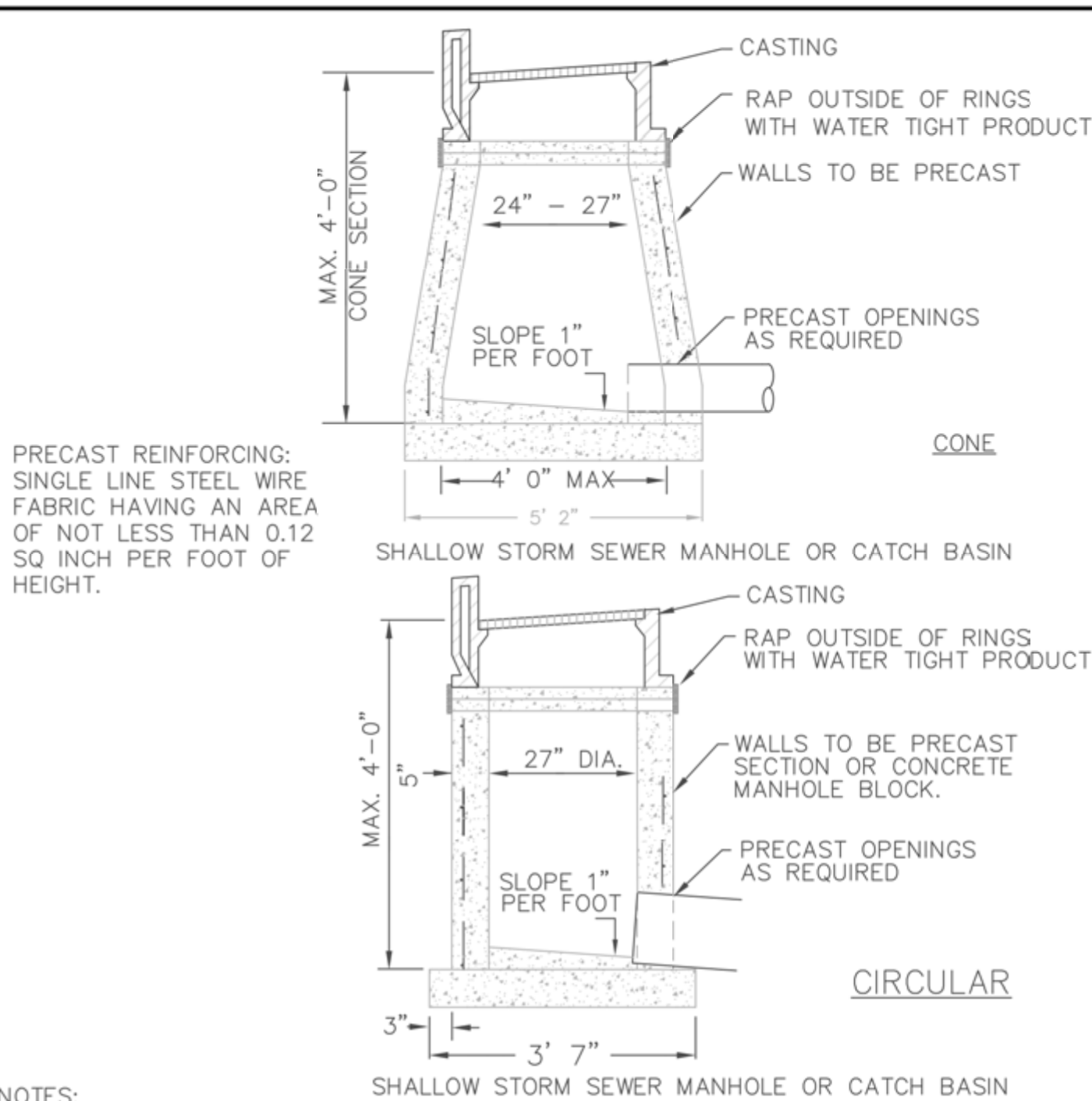
APPROVED:
4 - 2007



STANDARD DETAILS:
CATCH BASIN

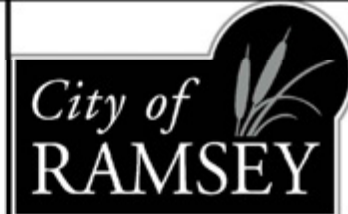
CITY PLATE No. STO-1

FOR REFERENCE ONLY



- NOTES:
1. MANHOLE INVERT SHALL BE SLOPED TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET.
 2. CONCRETE BASE SHALL BE 6" POURED IN PLACE OR 5" PRECAST SLAB.
 3. CONCRETE ADJUSTING RINGS TO BE INSTALLED MAX 7-2" RINGS, MIN 2-2" RINGS.
 4. GROUT BETWEEN RINGS
 5. SHIMS USED FOR LEVELING SHALL BE METAL OR CONCRETE.
 6. A 10 GAGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL SEWER LINES.
 7. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE
 8. TRACER WIRED ARE TO END IN STRUCTURES, AT FINIHD GRADE ON ALL SERVICES AND STUBS.

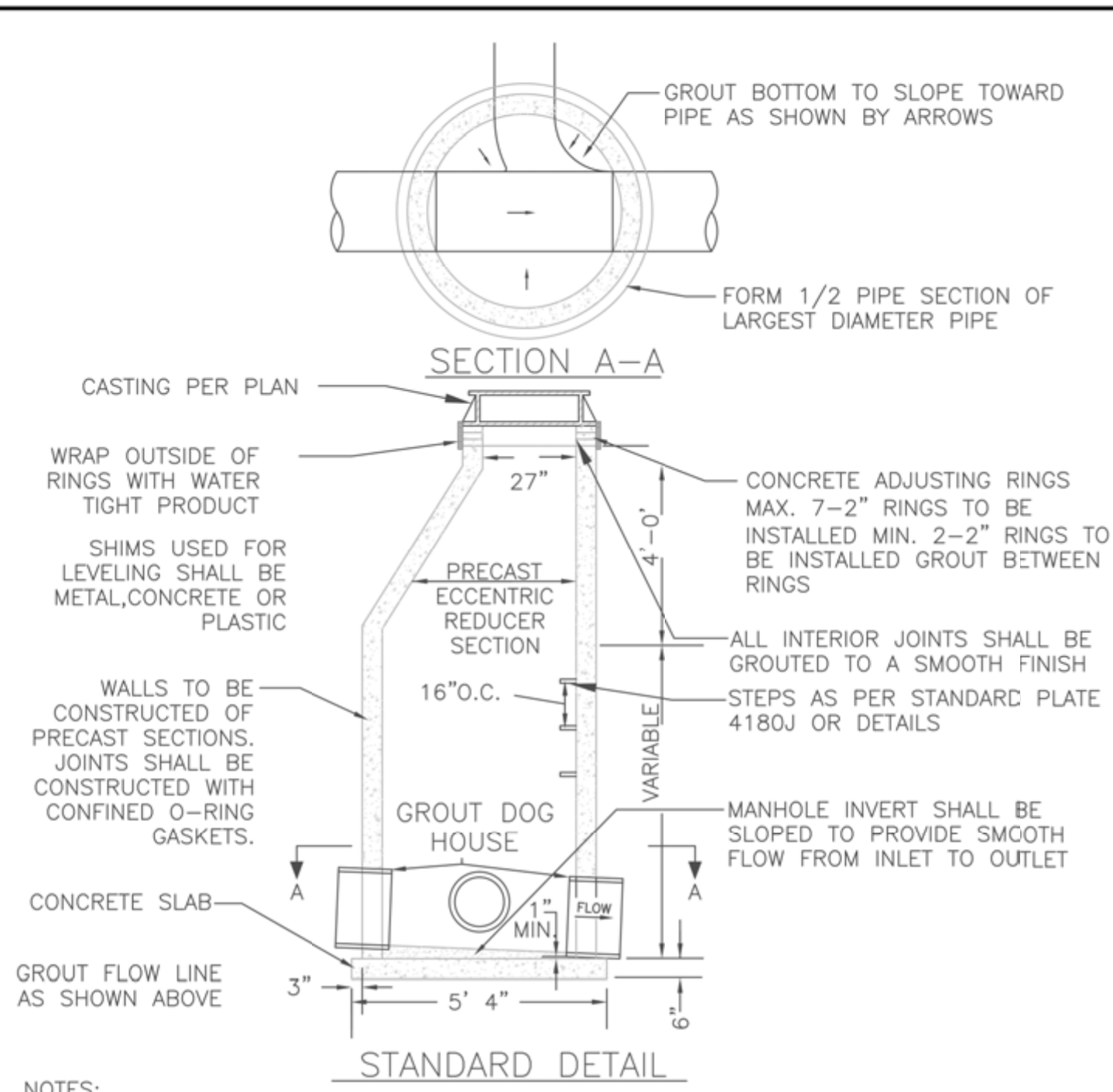
APPROVED:
6 - 2008



STANDARD DETAILS:
STORM AREA INLET

CITY PLATE No. STO-2

FOR REFERENCE ONLY



- NOTES:
1. MANHOLE INVERT SHALL SLOPED TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET
 2. INSPECTION OF MANHOLE REQUIRED BEFORE BACKFILLING
 3. ALL INLET INVERTS TO BE 0.10 ABOVE OUTLET INVERTS UNLESS OTHERWISE NOTED
 4. A 10 GAUGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL STORM LINES.
 5. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE
 6. STEPS ARE REQUIRED IF STRUCTURE FROM THE CASTING TO THE INVERT IS GREATER THAN 4 FEET
 7. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS

APPROVED:
1 - 2016



STANDARD DETAILS:
STORM MANHOLE

CITY PLATE No. STO-3

FOR REFERENCE ONLY

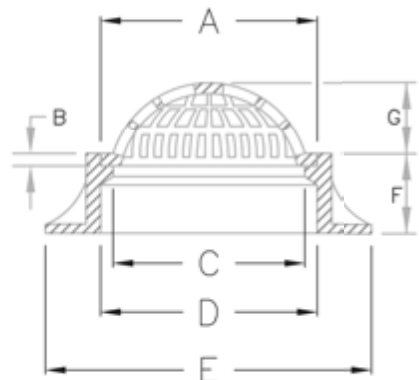
R-2560 Series
Beehive Grates with Frames

SUITABLE FOR DRAINAGE ON CIRCUMSTANCES WHERE CLOGGING OF A FLAT GRATING IS A PROBLEM. EXCELLENT FOR ROADSIDE OR EARTH DITCH CATCH BASINS.

Catalog No.	Dimensions in inches							Wt. LBS
	A	B	C	D	E	F	G	
R-2560-A	12	1 1/2	11	12 1/2	19	4	4	80
R-2560-B	15	1 1/4	15	20 1/2	21	5	3	120
R-2560-C	18	1 1/4	16 1/2	20 1/2	30	8	4	190
R-2560-C1	22	1 1/2	20	23	28	4	4 1/2	195
R-2560-C2	22	1 1/2	20 1/2	24	28 1/4	4	4 1/2	270
R-2560-D	22	1 1/2	20	24 1/2	35	9	4 1/2	315
R-2560-D1	22	1 1/2	20	23	28 1/4	4	7	210
R-2560-D2	22	1 1/2	20 1/2	24	35	6	7	285
R-2560-D3	22	1 1/2	20	24 1/2	36	9	7	345
R-2560-E	23	1 1/2	21	25 1/2	35 1/2	9	7	340
R-2560-EA	25 3/4	7/8	24 1/8	26 1/2	35 1/2	4	6	235
R-2560-EB	25 3/4	7/8	24 1/8	26 1/2	35 1/2	4	6	255
R-2560-E1	25 3/4	7/8	24 1/8	26 1/2	35 1/2	7	6	285
R-2560-E2	25 3/4	7/8	24 1/8	26 1/2	35 1/2	7	9	300
R-2560-E5	25 3/4	7/8	24 1/8	26 1/2	35 1/2	8	6	345
R-2560-E6	25 3/4	7/8	24 1/8	26 1/2	35 1/2	8	9	365
R-2560-E7	25 3/4	7/8	24 1/8	26 1/2	35 1/2	9	6	350
R-2560-E8	25 3/4	7/8	24 1/8	26 1/2	35 1/2	9	9	365
R-2560-E9	25 3/4	7/8	24 1/8	26 1/2	35 1/2	10	6	360
R-2560-E10	25 3/4	7/8	24 1/8	26 1/2	35 1/2	10	9	385
R-2560-G	32	1 1/2	30	36	46	7	4	535

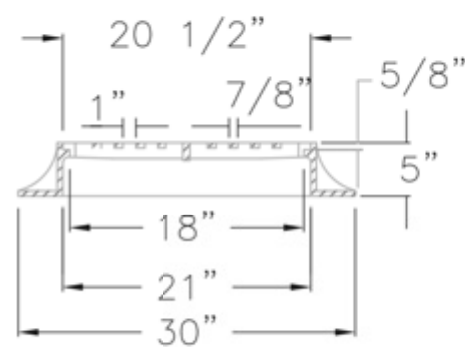


Furnished standard with ground bearing surfaces.

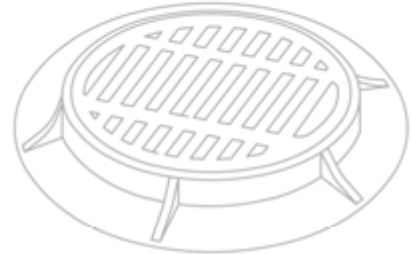


R-2570 Catch Basin Frame, Grate

Light Duty
Total Weight 170 Pounds

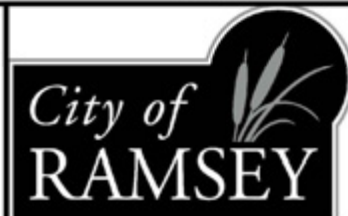


STORM CASTINGS FOR
NON-TRAFFIC AREAS
NTS



Furnished standard with ground bearing surfaces.

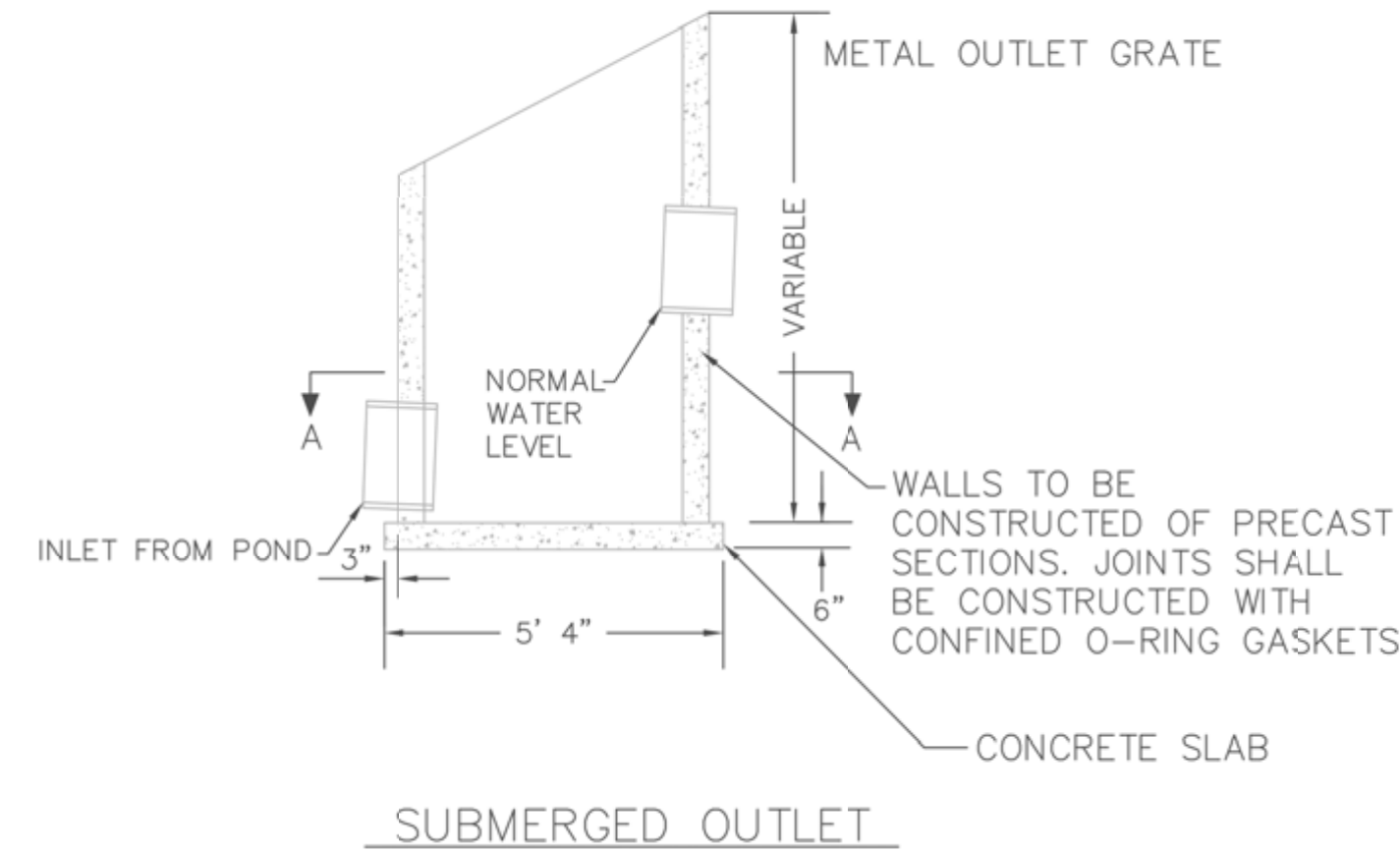
APPROVED:
9 - 2011



STANDARD DETAILS:
STORM CASTING - NON
TRAFFIC AREAS

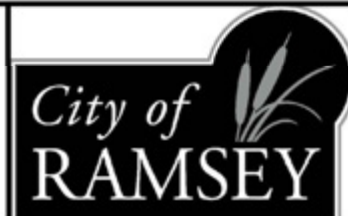
CITY PLATE No. STO-6

FOR REFERENCE ONLY



- NOTES:
1. A 10 GAGE SOLID COPPER TRACER WIRE REQUIRED WITH ALL SEWER LINES
 2. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE.
 3. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS.
 4. 6" BASE FOR ALL MANHOLES LESS THAN 14FT. DEEP, INCREASE BASE 2" PER 6 FT OF DEPTH BEYOND 14 FT. 5" PRECAST BASE MAY BE USED FOR MANHOLES LESS THAN 14 FT. DEEP.

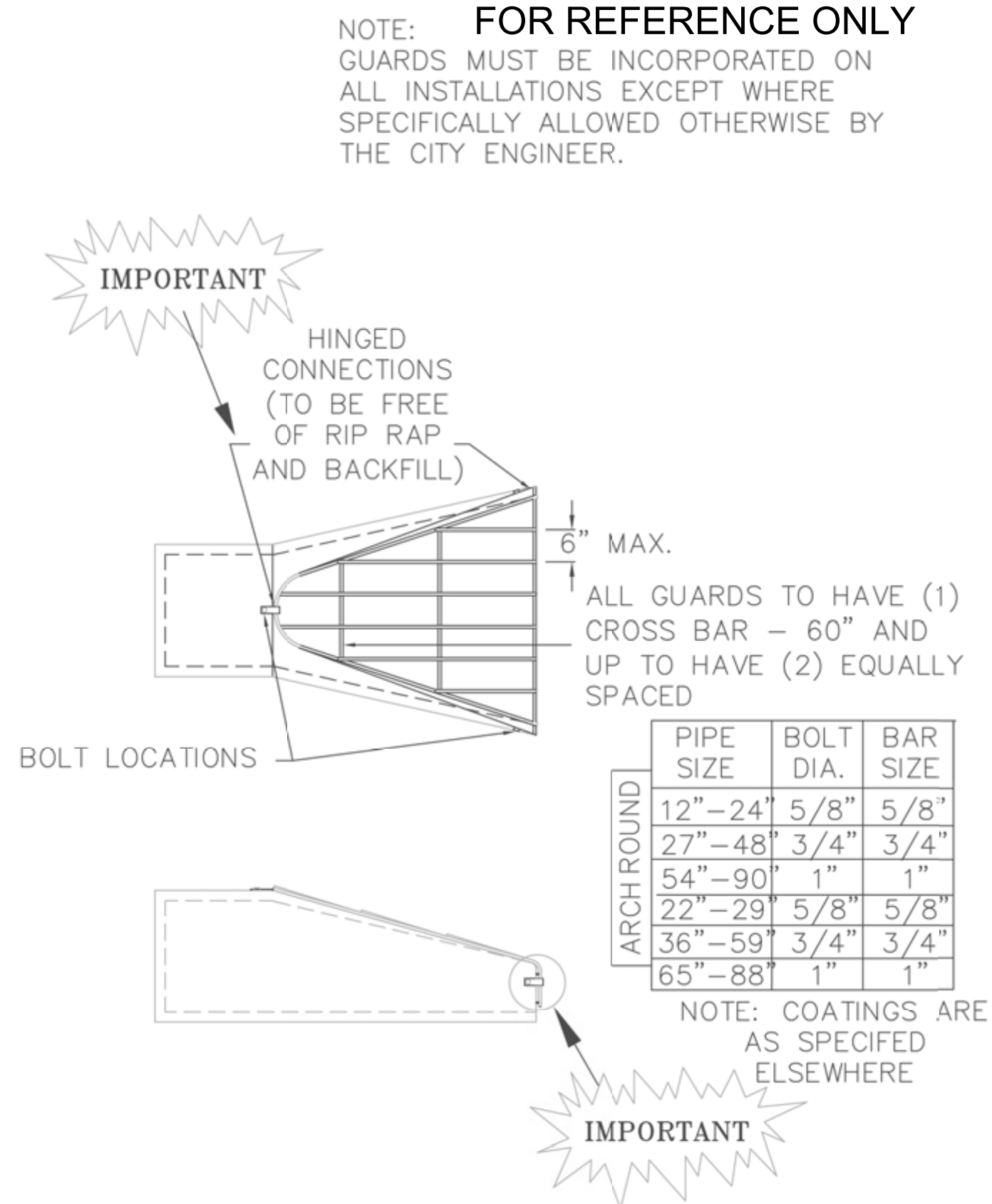
APPROVED:
1 - 2006



STANDARD DETAILS:
POND OUTLET

CITY PLATE No. STO-7

FOR REFERENCE ONLY



APPROVED:
2 - 2006



STANDARD DETAILS:
TRASH GUARD

CITY PLATE No. STO-8

PRELIMINARY - NOT FOR CONSTRUCTION

RAMSEY SPEC
INDUSTRIAL
PREPARED FOR
OPPIDAN
HOLDINGS LLC

GRADING &
STORMWATER
DETAILS

KHA PROJECT
160774051
DATE
05/06/2021
SCALE
AS SHOWN
DESIGNED BY
CUJ
DRAWN BY
KAM
CHECKED BY
MCB

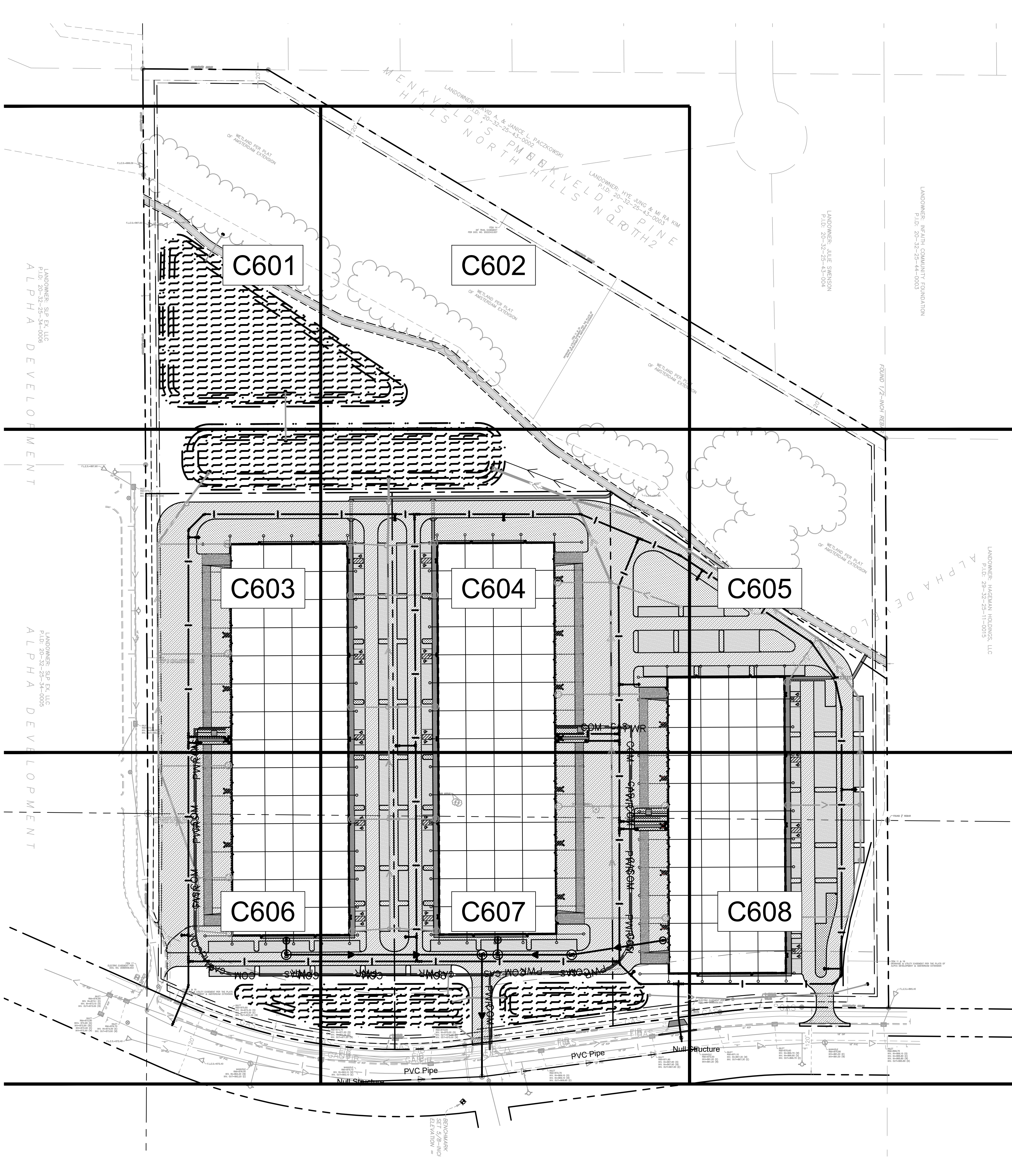
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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-845-4197
WWW.KIMLEY-HORN.COM

REVISIONS	DATE	BY
No.		

SHEET NUMBER
C509

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EXISTING

PROPOSED

GATE VALVE

HYDRANT

REDUCER

TEE

SANITARY SEWER MANHOLE

SANITARY CLEANOUT

WATERMAIN

SANITARY SEWER

STORM SEWER

UNDERGROUND ELECTRIC

TELEPHONE

GAS MAIN

DRAINAGE AND UTILITY EASEMENT

UTILITY PLAN NOTES

- ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
- SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
8" PVC SDR35 PER ASTM D-3034, FOR PIPES LESS THAN 12' DEEP
8" PVC SDR26 PER ASTM D-3034, FOR PIPES MORE THAN 12' DEEP
6" PVC SCHEDULE 40 PER ASTM D-1785
DUCTILE IRON PIPE PER AWWA C150
- WATER LINES SHALL BE AS FOLLOWS:
6" AND LARGER, PVC C-900 PER ASTM D 2241
CLASS 200 UNDER COUNTY ROADS, OTHERWISE CLASS 150
4" AND LARGER DUCTILE IRON PIPE PER AWWA C150
SMALLER THAN 3" PIPING SHALL BE COPPER TUBE TYPE "K" PER ANSI B16.22 OR PVC, 200 P.S.I., PER ASTM D1784 AND D2241.
- MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
- ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH RESTRAINTS SUCH AS THRUST BLOCKING, WITH STAINLESS STEEL OR COBALT BLUE BOLTS, OR AS INDICATED IN THE CITY SPECIFICATIONS AND PROJECT DOCUMENTS.
- ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE OR STRUCTURE).
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF 7'-6" COVER ON ALL WATERLINES.
- IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES, OR ANY OBSTRUCTION (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE SCH. 40 OR C900 WITH MECHANICAL JOINTS AT LEAST 10 FEET ON EITHER SIDE OF THE CENTER LINE OF THE CROSSING. THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE FASTENERS AS REQUIRED TO PROVIDE A MINIMUM OF 18" VERTICAL SEPARATION, MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50).
- LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
- TOPS OF MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS, IN GREEN AREAS, WITH WATERTIGHT LIDS.
- ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
- EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
- REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE CITY OF RAMSEY AND/OR STATE OF MN WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES.
- CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
- CONTRACTOR SHALL REFERENCE ARCH / MEP PLANS FOR SITE LIGHTING AND ELECTRICAL PLAN.
- BACKFLOW DEVICES (DDCV AND PRZ ASSEMBLIES) AND METERS ARE LOCATED IN THE INTERIOR OF THE BUILDING. REF. ARCH / MEP PLANS.
- ALL ONSITE WATERMAINS AND SANITARY SEWERS SHALL BE PRIVATELY OWNED AND MAINTAINED.
- ALL WATERMAIN STUBOUTS SHALL BE MECHANICALLY RESTRAINED WITH REACTION BLOCKING.

Know what's below.
Call before you dig.

NORTH

GRAPHIC SCALE IN FEET
0 50 100 200

PRELIMINARY - NOT FOR CONSTRUCTION

RAMSEY SPEC

INDUSTRIAL

PREPARED FOR

OPPIDAN

HOLDINGS LLC

RAMSEY

MN

UTILITY PLAN - OVERALL

SHEET NUMBER

C600

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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-845-4197
WWW.KIMLEY-HORN.COM

KHA PROJECT

160774051

DATE

05/06/2021

SCALE

AS SHOWN

DESIGNED BY

CUJ

DRAWN BY

KAM

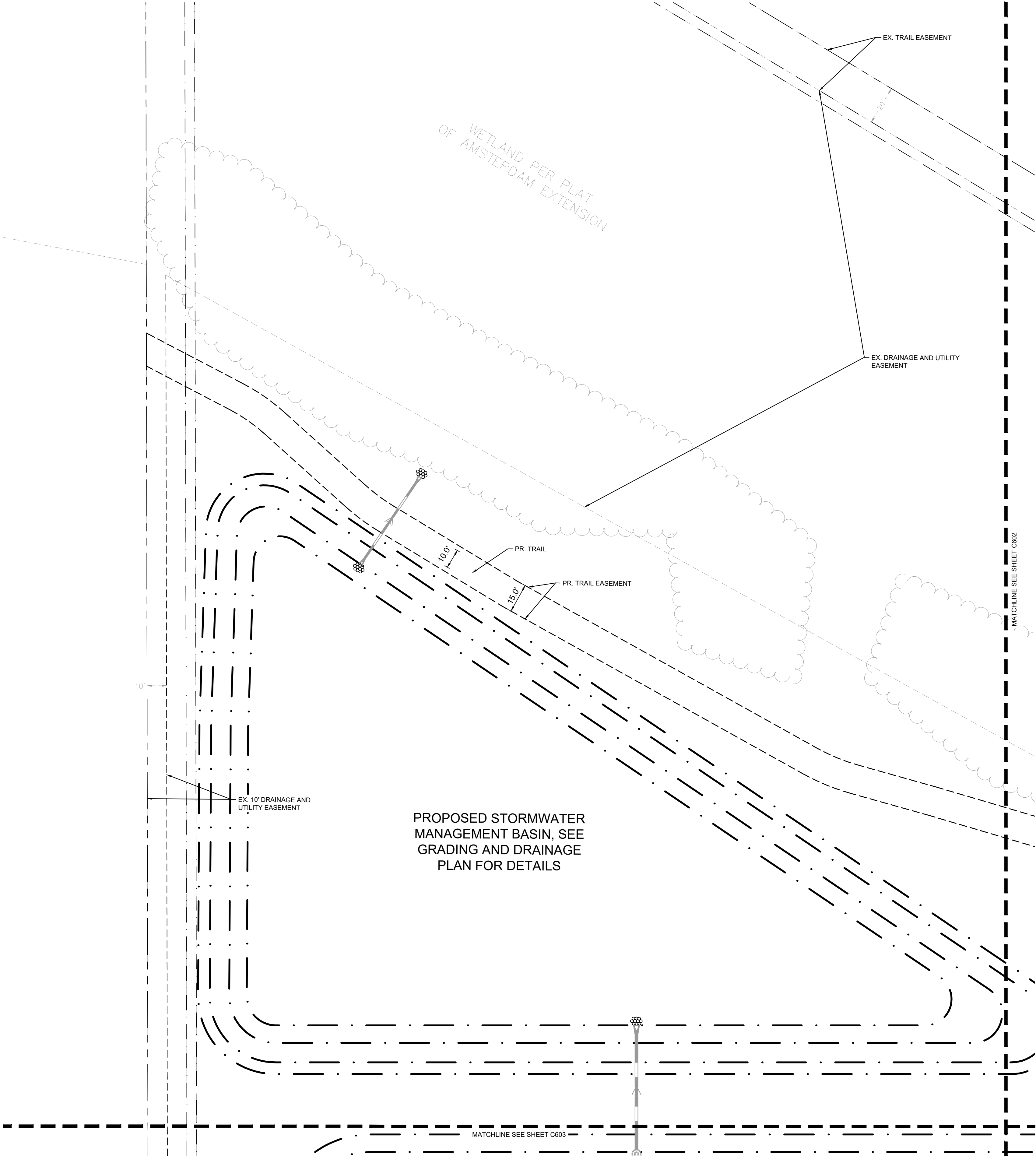
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REVISIONS

No.	DATE	BY

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KEYNOTE LEGEND	
(A)	CONNECT TO EXISTING WATERMAIN STUB WITH GATE VALVE
(B)	WETTAP EXISTING WATERMAIN WITH GATE VALVE
(C)	8" COMBINED DOMESTIC FIRE AND WATER SERVICE
(D)	CORE DRILL AND CONNECT TO EXISTING STRUCTURE
(E)	CONNECT TO EXISTING SANITARY SERVICE
(F)	CONSTRUCT MANHOLE OVER EXISTING SANITARY SEWER
(G)	SANITARY SEWER SERVICE
(H)	ADJUST EXISTING CASTING TO NEW RIM ELEVATION

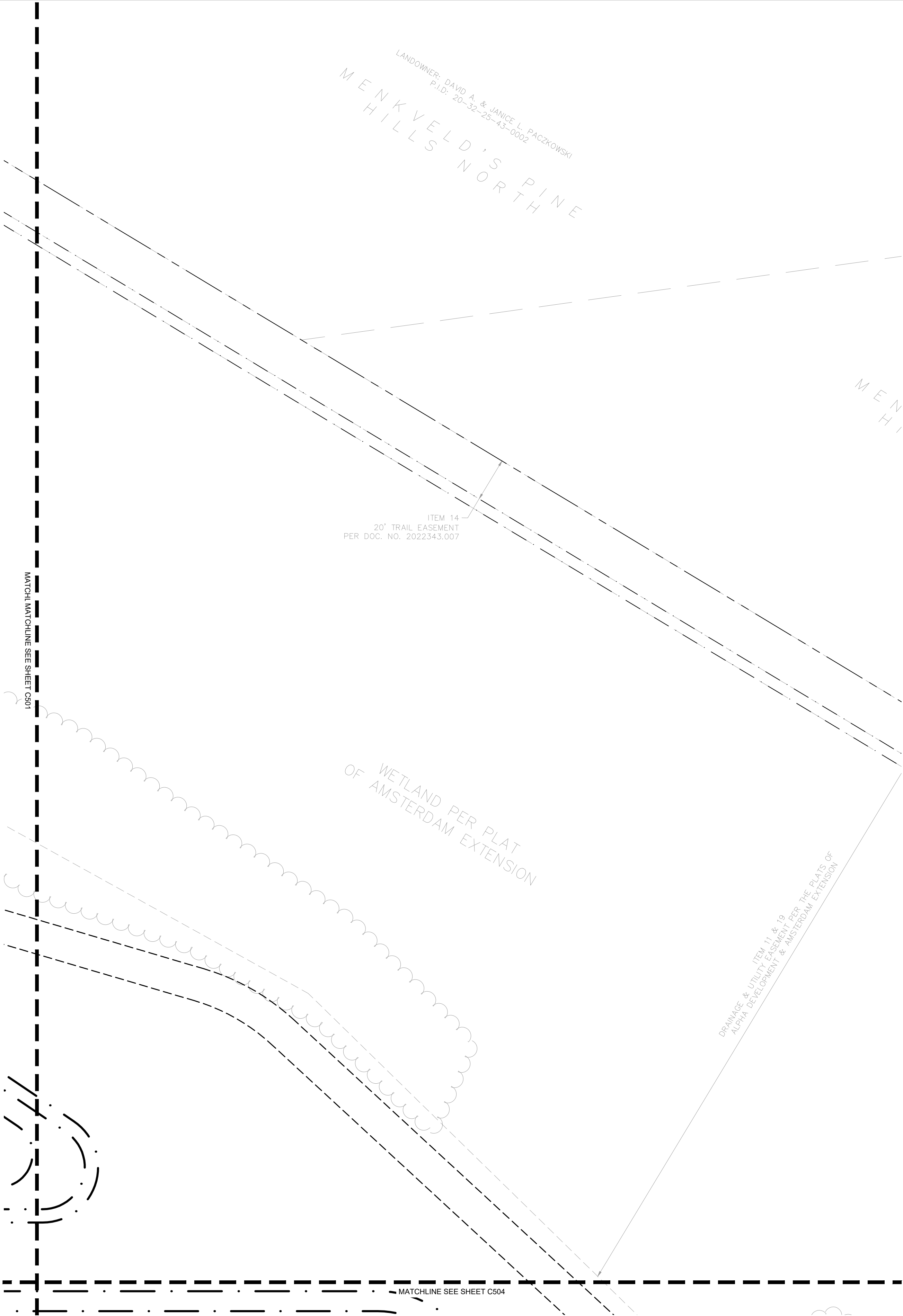
LEGEND	
EXISTING	PROPOSED
	GATE VALVE
	HYDRANT
	REDUCER
	TEE
	SANITARY SEWER MANHOLE
	SANITARY CLEANOUT
	WATERMAIN
	SANITARY SEWER
	STORM SEWER
	UNDERGROUND ELECTRIC
	TELEPHONE
	GAS MAIN

- UTILITY PLAN NOTES**
- ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
 - SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
8" PVC SDR35 PER ASTM D-3034, FOR PIPES LESS THAN 12' DEEP
8" PVC SDR26 PER ASTM D-3034, FOR PIPES MORE THAN 12' DEEP
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DUCTILE IRON PIPE PER AWWA C150
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CLASS 200 UNDER COUNTY ROADS, OTHERWISE CLASS 150
4" AND LARGER DUCTILE IRON PIPE PER AWWA C150
SMALLER THAN 3" PIPING SHALL BE COPPER TUBE TYPE "K" PER ANSI 816.22 OR PVC, 200 P.S.I., PER ASTM D1784 AND D2241.
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 - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 7'-5" COVER ON ALL WATERLINES.
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PRELIMINARY - NOT FOR CONSTRUCTION

KHA PROJECT 160774051 DATE 05/06/2021 SCALE AS SHOWN DESIGNED BY CLJ DRAWN BY KAM CHECKED BY MCB	 © 2021 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE: 651-445-4197 WWW.KIMLEY-HORN.COM	LIBRARY / CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. MICHAEL C. BRANDT MN LIC. NO. 4261 DATE: 05/06/2021	REVISIONS	DATE	BY
RAMSEY SPEC INDUSTRIAL PREPARED FOR OPPIDAN HOLDINGS LLC		UTILITY PLAN		MN	
SHEET NUMBER C601					

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KEYNOTE LEGEND

- (A) CONNECT TO EXISTING WATERMAIN STUB WITH GATE VALVE
- (B) WETTAP EXISTING WATERMAIN WITH GATE VALVE
- (C) X" DOMESTIC WATER SERVICE
- (D) X" FIRE SERVICE
- (E) CORE DRILL AND CONNECT TO EXISTING STRUCTURE
- (F) CONNECT TO EXISTING SANITARY SERVICE
- (G) CONSTRUCT MANHOLE OVER EXISTING SANITARY SEWER
- (H) SANITARY SEWER SERVICE
- (I) ADJUST EXISTING CASTING TO NEW RIM ELEVATION

LEGEND

- | EXISTING | PROPOSED | |
|----------|----------|------------------------|
| | | GATE VALVE |
| | | HYDRANT |
| | | REDUCER |
| | | TEE |
| | | SANITARY SEWER MANHOLE |
| | | SANITARY CLEANOUT |
| | | WATERMAIN |
| | | SANITARY SEWER |
| | | STORM SEWER |
| | | UNDERGROUND ELECTRIC |
| | | TELEPHONE |
| | | GAS MAIN |

UTILITY PLAN NOTES

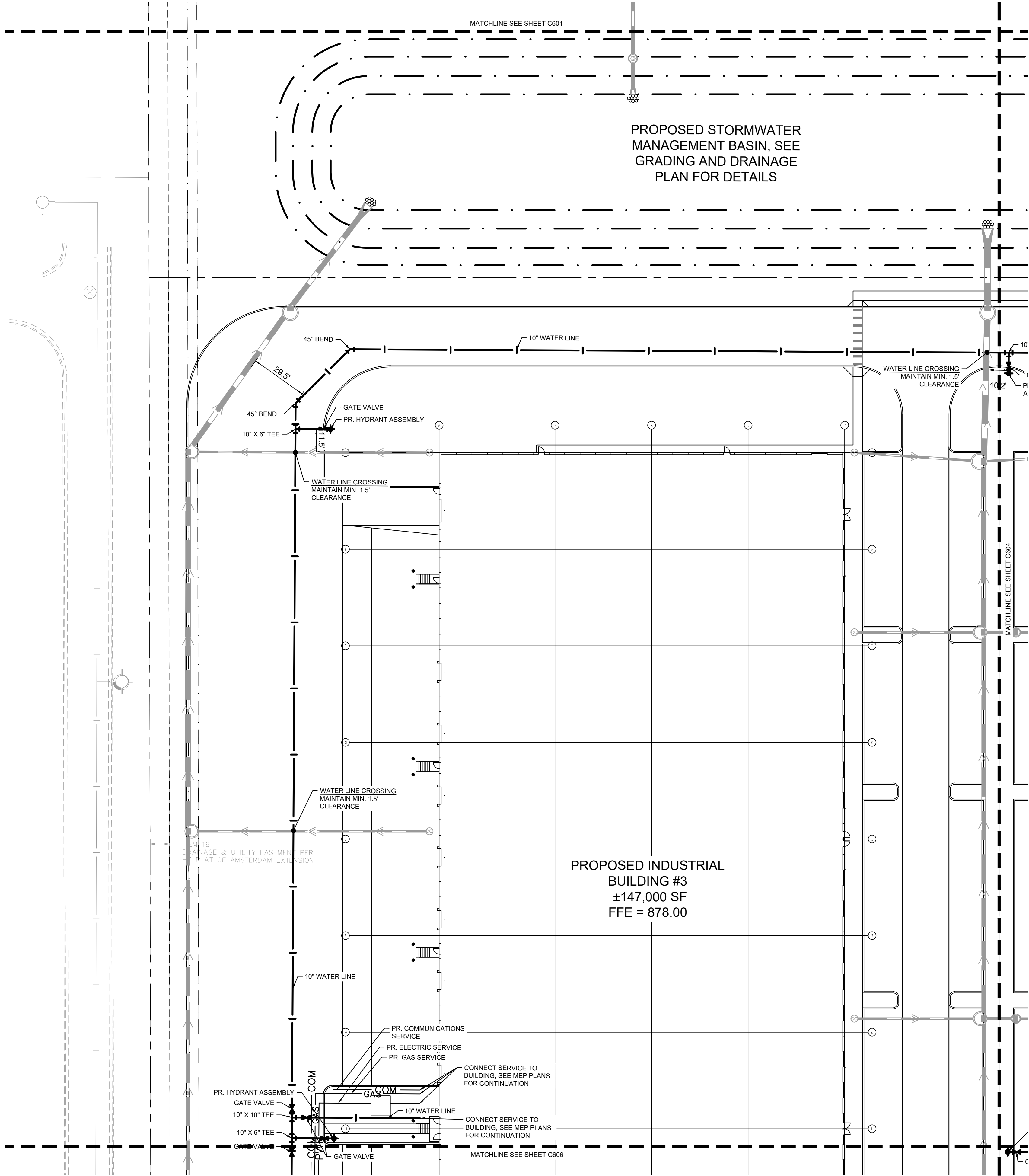
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GRAPHIC SCALE IN FEET

PRELIMINARY - NOT FOR CONSTRUCTION

RAMSEY SPEC INDUSTRIAL PREPARED FOR OPPIDAN HOLDINGS LLC	SHEET NUMBER C602	RAMSEY MN	UTILITY PLAN	KHA PROJECT 160774051 DATE 05/06/2021 SCALE AS SHOWN DESIGNED BY CLJ DRAWN BY KAM CHECKED BY MCB	LICENSED PROFESSIONAL ENGINEER MICHAEL C. BRANDT DATE 05/06/2021 MN LIC. NO. 4261	© 2021 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE: 651-845-4197 WWW.KIMLEY-HORN.COM	Kimley»Horn	No.	REVISIONS			DATE	BY

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LEGEND		
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		HYDRANT
		REDUCER
		TEE
		SANITARY SEWER MANHOLE
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Know what's below.
Call before you dig.

NORTH

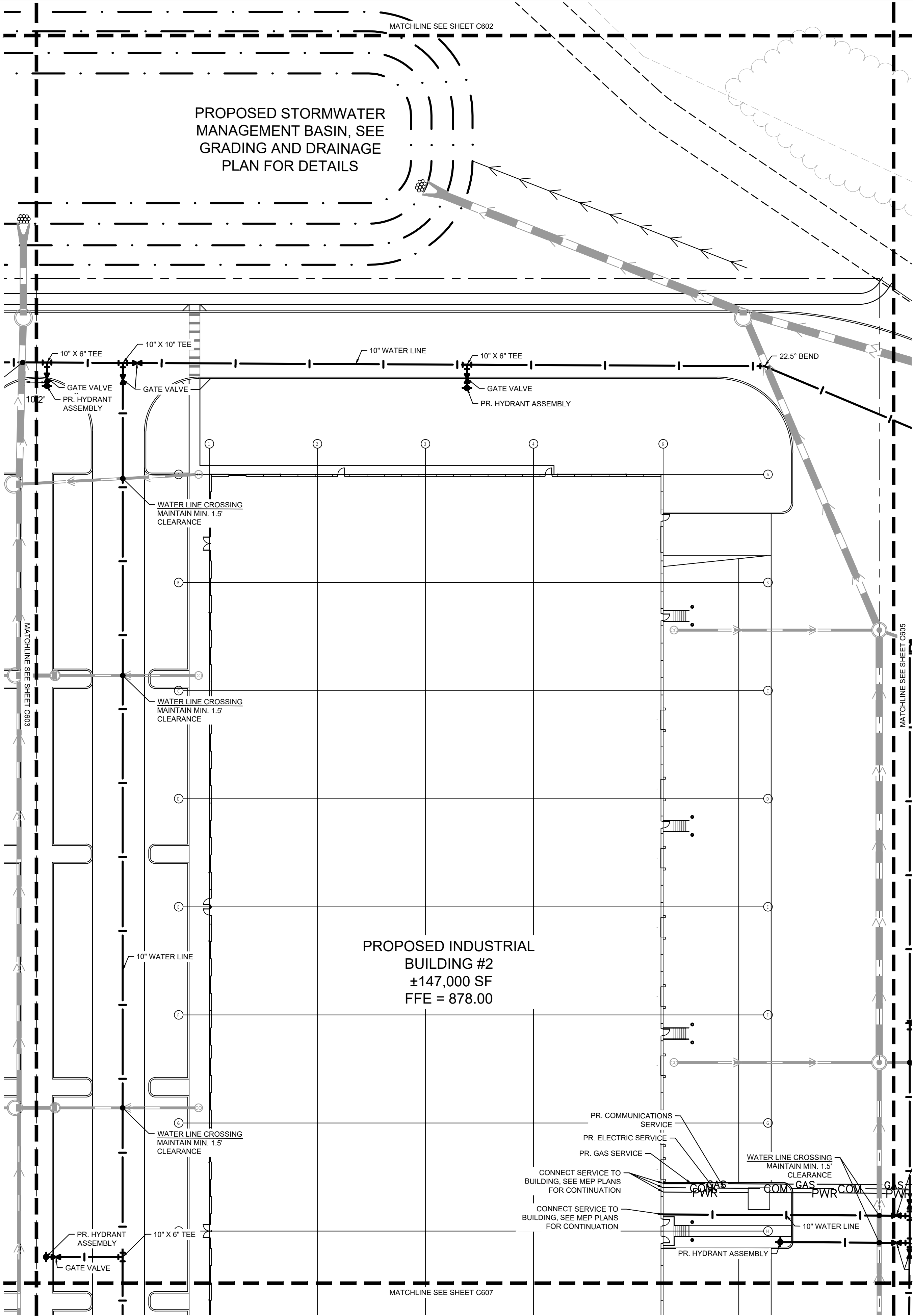
GRAPHIC SCALE IN FEET
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PRELIMINARY - NOT FOR CONSTRUCTION

KHA PROJECT 160774051		DATE 05/06/2021		SCALE AS SHOWN		DESIGNED BY CUJ		DRAWN BY KAM		CHECKED BY MCB											
UTILITY PLAN																					
RAMSEY SPEC INDUSTRIAL PREPARED FOR OPPIDAN HOLDINGS LLC																					
SHEET NUMBER C603																					
REVISIONS																					
DATE																					
BY																					

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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
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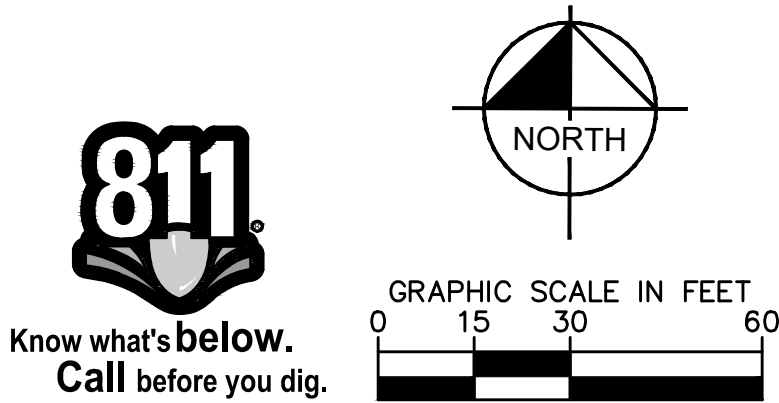
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LEGEND

- | EXISTING | PROPOSED | |
|----------|----------|----------------------|
| | | GATE VALVE |
| | | REDUCER |
| | | TEE |
| | | SANITARY CLEANOUT |
| | | WATERMAIN |
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RAMSEY SPEC
INDUSTRIAL
PREPARED FOR
OPPIDAN
HOLDINGS LLC

UTILITY PLAN

LIBRARY / CERTIFY THAT THIS PLAN
SPECIFICATION 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.

KHA PROJECT
160774051

DATE
05/06/2021

SCALE
AS SHOWN

DESIGNED BY
CUJ

DRAWN BY
KAM

CHECKED BY
MCB

MICHAEL C. BRANDT
MN
DATE: 05/06/2021 LIC. NO. 42651

Kimley»Horn

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767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-845-4197
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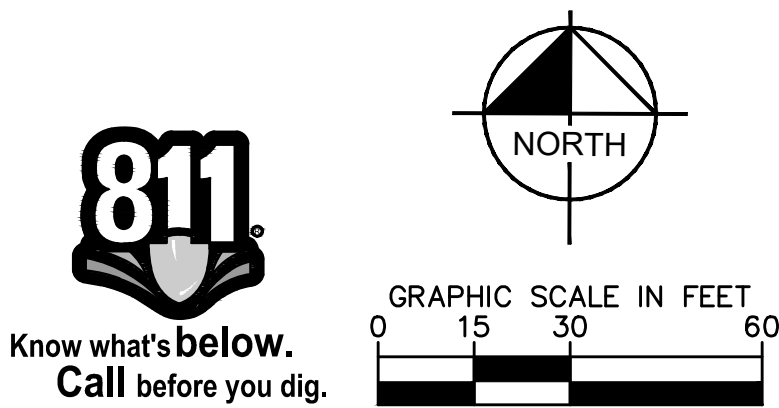
REVISIONS	DATE	BY
No.		

SHEET NUMBER
C604

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EXISTING	PROPOSED	
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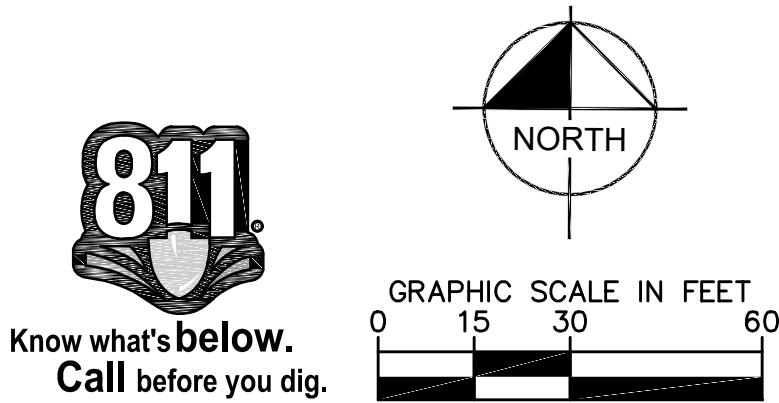
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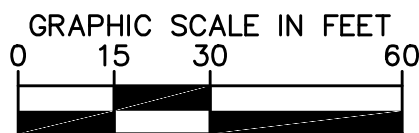
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15. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
16. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES.
17. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
18. CONTRACTOR SHALL REFERENCE ARCH / MEP PLANS FOR SITE LIGHTING AND ELECTRICAL PLAN.
19. BACKFLOW DEVICES (DCCV AND PRZ ASSEMBLIES) AND METERS ARE LOCATED IN THE INTERIOR OF THE BUILDING. REF. ARCH / MEP PLANS.
20. ALL MAINTENANCE WATERMANS AND SANITARY SEWERS SHALL BE PRIVATELY OWNED AND MAINTAINED.
21. ALL WATERMAIN STUBOUTS SHALL BE MECHANICALLY RESTRAINED WITH REACTION BLOCKING.



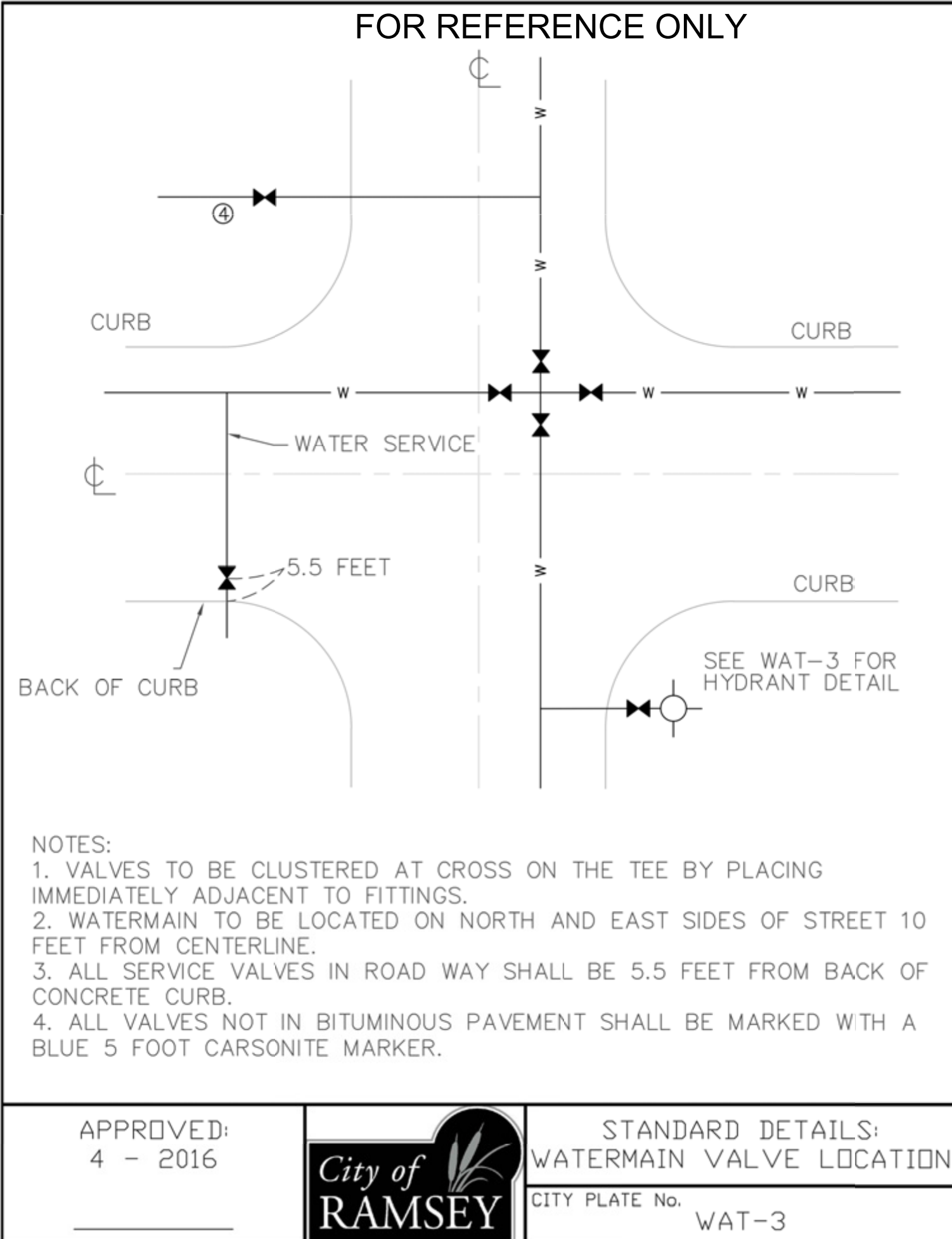
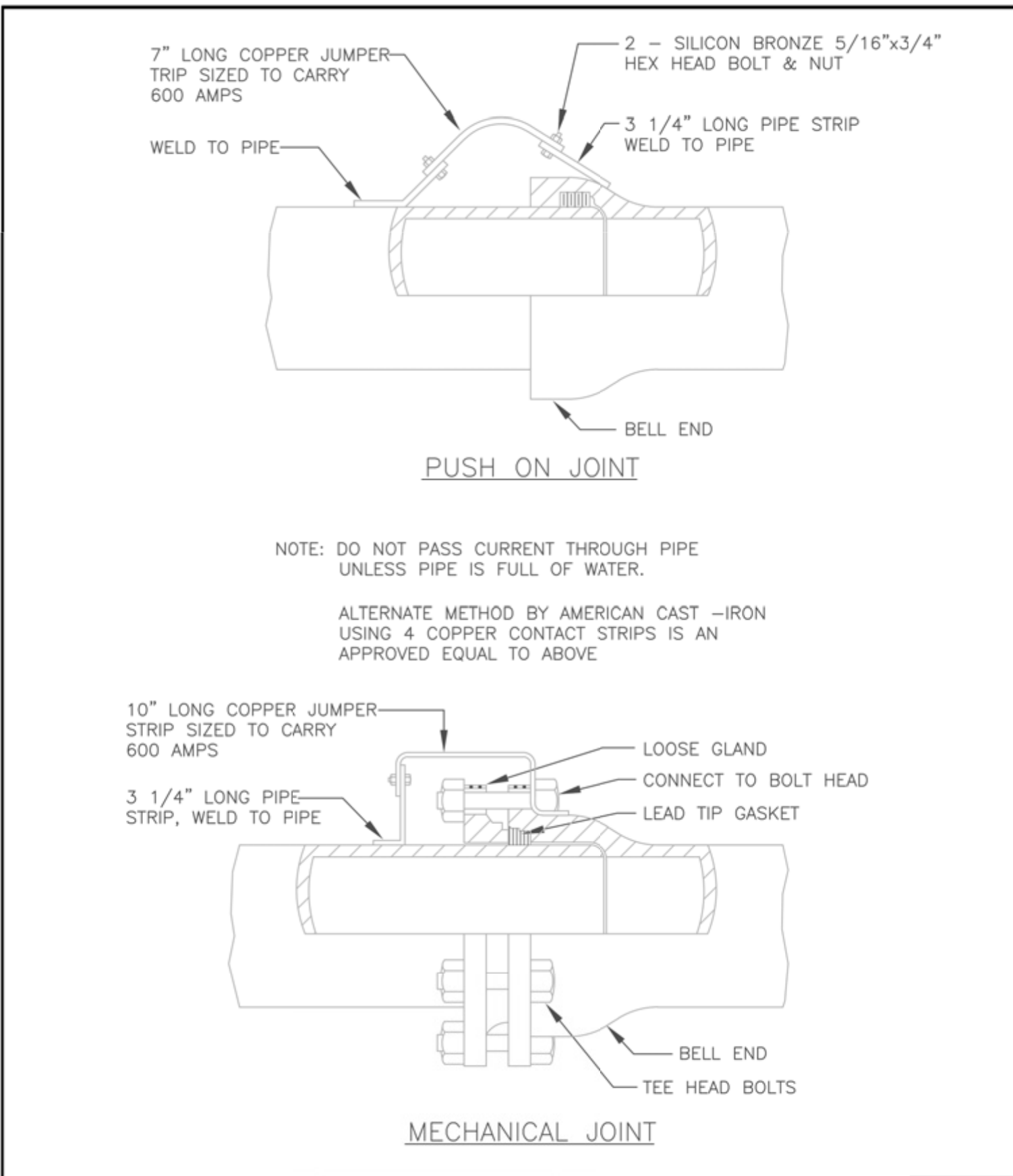
(A)	CONNECT TO EXISTING WATERMAIN STUB WITH GATE VALVE
(B)	WET TAP EXISTING WATERMAIN WITH GATE VALVE
(C)	X" DOMESTIC WATER SERVICE
(D)	X" FIRE SERVICE
(E)	CORE DRILL AND CONNECT TO EXISTING STRUCTURE
(F)	CONNECT TO EXISTING SANITARY SERVICE
(G)	CONSTRUCT MANHOLE OVER EXISTING SANITARY SEWER
(H)	SANITARY SEWER SERVICE
(I)	ADJUST EXISTING CASTING TO NEW RIM ELEVATION

EXISTING	PROPOSED	
		GATE VALVE
		HYDRANT
		REDUCER
		TEE
		SANITARY SEWER MANHOLE
		SANITARY CLEANOUT
		WATERMAIN
		SANITARY SEWER
		STORM SEWER
		UNDERGROUND ELECTRIC
		TELEPHONE
		GAS MAIN

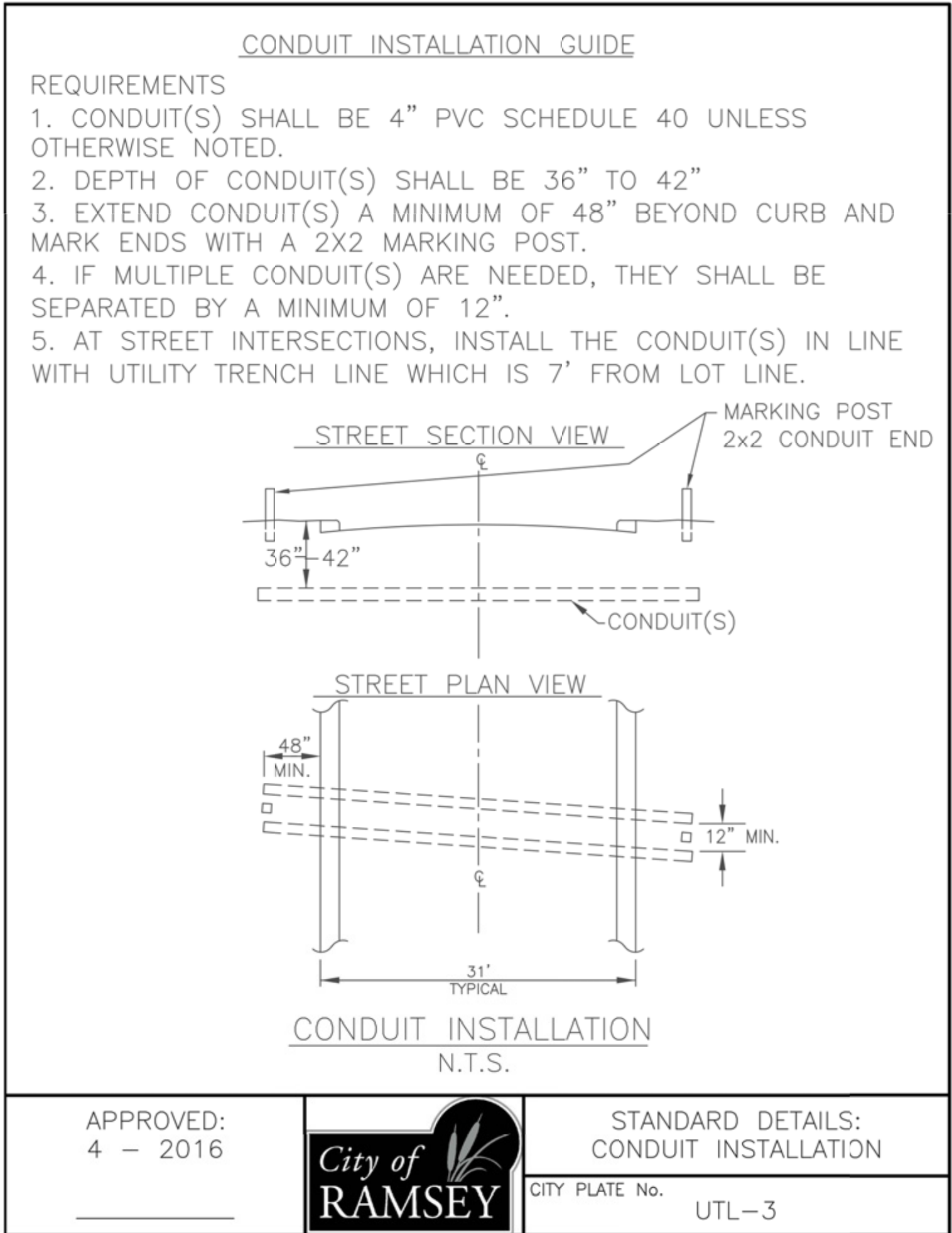
- ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
 - 8" PVC SDR35 PER ASTM D-3034, FOR PIPES LESS THAN 12" DEEP
 - 8" PVC SDR26 PER ASTM D-3034, FOR PIPES MORE THAN 12" DEEP
 - 8" PVC SCHEDULE 40 PER ASTM D-1785
 - DUCTILE IRON PIPE PER AWWA C150
3. WATER LINES SHALL BE AS FOLLOWS:
 - 6" AND LARGER, PVC C-900 PER ASTM D 2241
 - CLASS 200 UNDER COUNTY ROADS, OTHERWISE CLASS 150
 - 4" AND LARGER DUCTILE IRON PIPE PER AWWA C150
 - SMALLER THAN 3" PIPING SHALL BE COPPER TUBE TYPE "K" PER ANSI B16.22 OR PVC, 200 P.S.I., PER ASTM D1784 AND D2241.
4. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
5. ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH RESTRAINTS SUCH AS THRUST BLOCKING, WITH STAINLESS STEEL OR COBALT BLUE BOLTS, OR AS INDICATED IN THE CITY SPECIFICATIONS AND PROJECT DOCUMENTS.
6. ALL UTILITIES SHALL BE KEPT TEN (10) FEET (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE OR STRUCTURE).
7. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 7'-5" COVER ON ALL WATERLINES.
8. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES, OR ANY OBSTRUCTION (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE 8"CH, 40 OR C900 WITH MECHANICAL JOINTS AT LEAST 10 FEET ON EITHER SIDE OF THE CENTER LINE OF THE CROSSING. THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE FASTENERS AS REQUIRED TO PROVIDE A MINIMUM OF 18" VERTICAL SEPARATION. MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI A21.11 (AWWA C-151) (CLASS 50).
9. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
10. TOPS OF MANHOLES SHOULD BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS, IN GREEN AREAS, WITH WATERTIGHT LIDS.
11. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
12. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
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RAMSLEY SPEC INDUSTRIAL PREPARED FOR OPPIDAN HOLDINGS LLC RAMSLEY		MIN	
SHEET NUMBER C607		UTILITY PLAN	
KHA PROJECT 1607740351		SCALE AS SHOWN	
DATE 05/06/2021		DESIGNED BY CJJ	
		DRAWN BY KAM	
		CHECKED BY MCB	
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		MICHAEL C. BRANDT MN DATE: 05/06/2021 LIC. NO. 42661	
Kimley»Horn		© 2021 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE: 651-645-4197 WWW.KIMLEY-HORN.COM	
		No.	REVISIONS
		DATE	BY



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