Porsche of St. Paul

Sheet Index

G-001 Title Sheet

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A-201 Exterior Elevations
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BA
BAKER ASSOCIATES, INC.
ARCHITECTS

150 SOUTH FIFTH STREET
SUITE 1425
MINNEAPOLIS, MN 55402-1200
TELEPHONE: 612.339.8601
FAX: 612.339.5608

Porsche of
St. Paul
XXXX Maplewood Drive
Maplewood, MN 55109

New Construction

Issued:
CDRBA Submittal 06 Oct 2015

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 ARCHITECT under the laws of the state of MINNESOTA

Nguyen T. Hoang

Date: xx/xx/xxxx
Reg No: 50034

Sheet Title

Title Sheet

Scale	N.S.
Date	10/06/2015
Comm No	2552

Sheet Number
G-001

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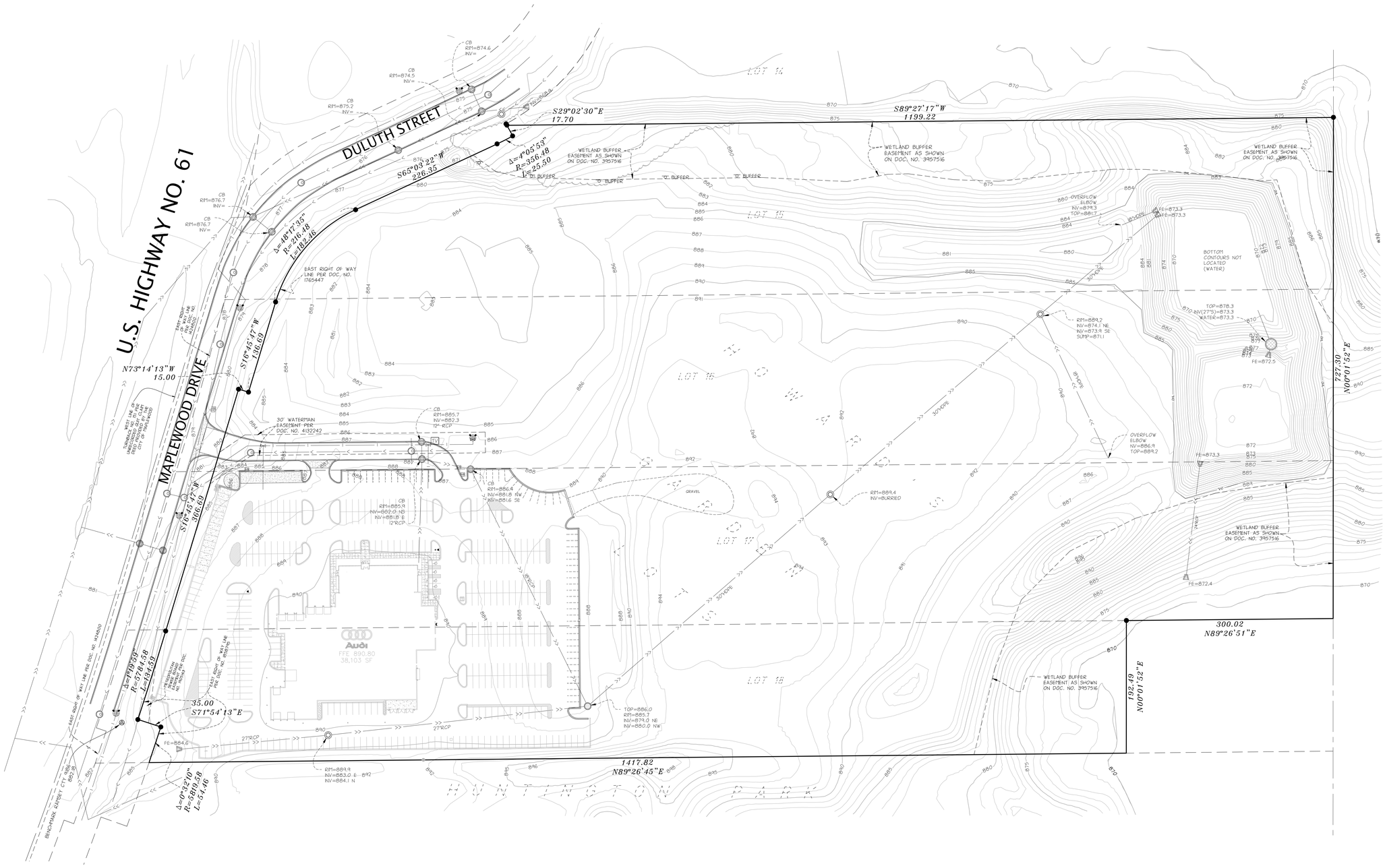
PORSCHE
OF ST. PAUL



CONTACT:

TCA REAL ESTATE, LLC
15802 WAYZATA BLVD.
WAYZATA, MN 55391

COUNTY/CITY:

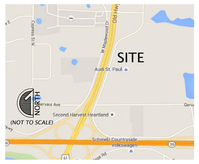
RAMSEY COUNTY

CITY OF MAPLEWOOD

NORTH

0 60 120

VICINITY MAP – NTS



SEC. 10, TWP. 29, RNG. 22,
CITY OF MAPLEWOOD, RAMSEY
COUNTY, MINNESOTA

REVISIONS:

DATE	REVISION
9-5-15	INITIAL ISSUE
10-2-15	ADDED SHEET 3 - PONDS

CERTIFICATION:

I hereby certify that this plan was prepared by me, or under my direct supervision, and that I am a duly Licensed Land Surveyor under the laws of the state of Minnesota.

Daniel L. Thurmes Registration Number: 25718

Date: 9-9-15

PROJECT LOCATION:

2450
HIGHWAY 61

PID#092922140013

Suite #1
6750 Stillwater Blvd. N.
Stillwater, MN 55082
Phone 651.275.8969
Fax 651.275.8976
dan@cssurvey.net

CORNERSTONE
LAND SURVEYING, INC.

FILE NAME SURVEDL10
PROJECT NO. EDL15010

BOUNDARY/TOPOGRAPHIC
SURVEY
SHEET 1 OF 2 SHEETS

LEGAL DESCRIPTION:

The following Legal Description is as shown on Stewart Title Guaranty Company Title Commitment No. 35397, dated December 18th, 2012.

Parcel 2:
All of Lots 15, 16 and 17, lying Easterly of Duluth Street and Maplewood Drive, W. H. Howard's Garden Lots, Ramsey County, Minnesota, according to the recorded plat thereof, Ramsey County, Minnesota. All that part of Lot 18 lying Easterly of Duluth Street and Maplewood Drive and Westerly of the East 300 feet thereof, W. H. Howard's Garden Lots, Ramsey County, Minnesota, according to the recorded plat thereof, Ramsey County, Minnesota. Abstract Property.

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11. Covenants, conditions and restrictions contained in Declaration dated May 11, 2005, filed June 19,2006, as Document No. 3957516.

12. Terms and conditions of and easements contained in Private Water Main Agreement dated July 12, 2005, filed December 18, 2008, as Document No. 4132242

BENCHMARKS

ELEVATIONS BASED ON (NAVD 88). TOP OF RAMSEY COUNTY BENCH MARK #9186 NEAR THE SOUTHWEST CORNER OF SURVEYED PARCEL. ELEVATION = 882.24

SURVEY NOTES:

1. PROJECT COORDINATES ARE BASED ON INFORMATION PROVIDED BY THE RAMSEY COUNTY SURVEYORS OFFICE (NAD 88)
2. UNDERGROUND UTILITIES NOT SHOWN
3. BOUNDARY LINES SHOWN PER 2012 SURVEY BY WESTWOOD PROFESSIONAL SERVICES, INC. FOR TCA REAL ESTATE, LLC.
4. CONTOURS SHOWN ON SHEET 2 ARE BASED ON FIELD COLLECTED DATA FROM CORNERSTONE LAND SURVEYING, INC. CONTOURS SHOWN FOR THR REMAINDER OF THE SITE ARE SHOWN PER LIDAR DATA OBTAINED FROM THE DNR WEB SITE MNTOPO.

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CALL BEFORE YOU DIG!
Gopher State One Call
TWIN CITY AREA: 651-454-0002
TOLL FREE: 1-800-252-1166

AREA:

TOTAL AREA = 1,392,411 SQ.FT. / 31.965 ACRES

LEGEND

CABLE TV PEDESTAL
AIR CONDITIONER
ELECTRIC MANHOLE
ELECTRIC METER
ELECTRIC PEDESTAL
ELECTRIC TRANSFORMER
LIGHT POLE
GUY WIRE
POWER POLE
GAS METER
TELEPHONE PEDESTAL
SANITARY MANHOLE
CATCH BASIN
FLARED END SECTION
ROOF DRAIN
WATER MANHOLE
STORM MANHOLE
FIRE DEPT. CONNECTION
HYDRANT
CURB STOP
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BOLLARD
FLAG POLE
TRAFFIC SIGN
UNKNOWN MANHOLE
X 950.0 SPOT ELEVATION
CONIFEROUS TREE
DECIDUOUS TREE
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CTV — UNDERGROUND CABLE TV
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UT — UNDERGROUND TELEPHONE
OV — OVERHEAD UTILITY
UG — UNDERGROUND GAS
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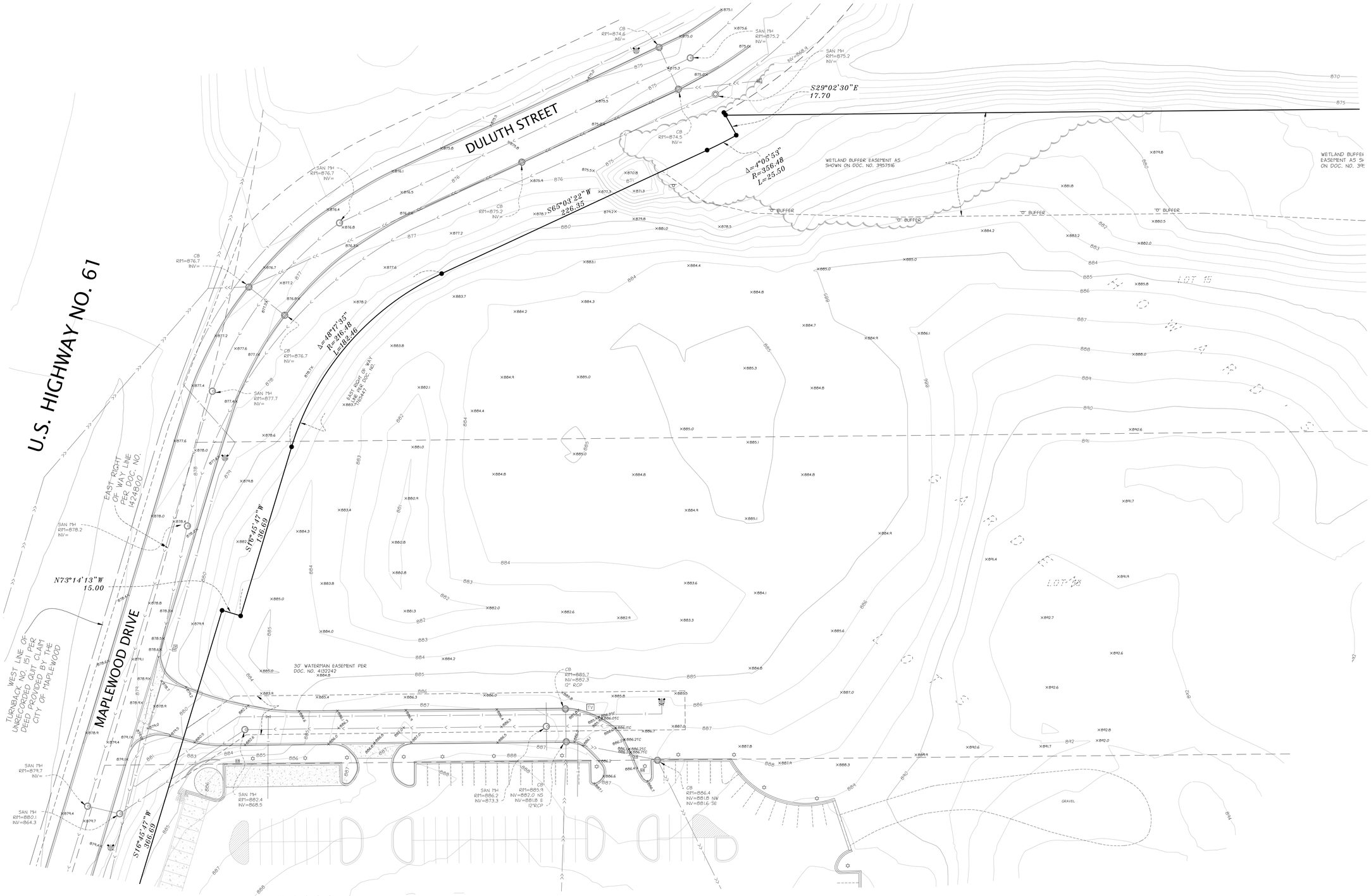
W — WATERMAIN
FENCE
CURB [TYPICAL]
890 CONTOURS
BUILDING LINE
BITUMINOUS SURFACE
CONCRETE SURFACE

PORSCHE
OF ST. PAUL



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NORTH

0 30 60

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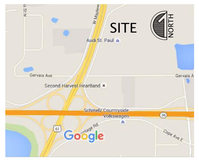

SEC. 10, TWP. 29, RNG. 22,
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Date: 9-9-15

PROJECT LOCATION:

2450
HIGHWAY 61
PID#092922140013

Suite #1
6750 Stillwater Blvd. N.
Stillwater, MN 55082
Phone 651.275.8969
Fax 651.275.8976
dan@
cssurvey
.net

CORNERSTONE
LAND SURVEYING, INC.

FILE NAME	SURVEDL10
PROJECT NO.	EDL15010

BOUNDARY/TOPOGRAPHIC
SURVEY
SHEET 2 OF 2 SHEETS

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LEGEND

CABLE TV PEDESTAL
AIR CONDITIONER
ELECTRIC MANHOLE
ELECTRIC METER
ELECTRIC PEDESTAL
ELECTRIC TRANSFORMER
LIGHT POLE
GUY WIRE
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SD — STORM SEWER
W — WATERMAIN
F — FENCE
CURB [TYPICAL]
1230 — CONTOURS
BUILDING LINE
BITUMINOUS SURFACE
CONCRETE SURFACE

PORSCHE
OF ST. PAUL

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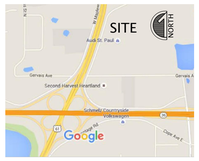

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REVISIONS:

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Fax 651.275.8976
dan@
cssurvey
.net

CORNERSTONE
LAND SURVEYING, INC.

FILE NAME	SURVEDL10
PROJECT NO.	EDL15010

BOUNDARY/TOPOGRAPHIC
SURVEY
SHEET 3 OF 3 SHEETS

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LEGEND

CABLE TV PEDESTAL
AIR CONDITIONER
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ELECTRIC METER
ELECTRIC PEDESTAL
ELECTRIC TRANSFORMER
LIGHT POLE
GUY WIRE
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GAS METER
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UG — UNDERGROUND GAS
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SS — STORM SEWER
W — WATERMAIN
FENCE
CURB [TYPICAL]
950 — CONTOURS
BUILDING LINE
BITUMINOUS SURFACE
CONCRETE SURFACE

DEMOLITION NOTES

1. BACKGROUND INFORMATION AND TOPOGRAPHIC SURVEY PROVIDED BY CORNERSTONE LAND SURVEYING INC., STILLWATER, MINNESOTA ON SEPTEMBER 9, 2015, EXPRESSLY FOR THIS PROJECT.
2. ALL REQUIRED PERMITS FOR DEMOLITION SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO BEGINNING WORK.
3. CONSTRUCTION ENTRANCE AND SILT FENCE (SHEET C3.1) SHALL BE IN PLACE PRIOR TO DEMOLITION OPERATIONS. PROTECT ALL ADJACENT LANDS FROM DAMAGE DURING DEMOLITION WORK. ANY OFF-SITE AREAS DISTURBED SHALL BE RETURNED TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION.
4. THE LOCATIONS, SIZES AND TYPES OF ALL EXISTING UTILITIES, SUCH AS WATERMAINS, SEWERS, ETC. AS SHOWN ON THESE PLANS HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATIONS SHOWN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION AND HAVE THEIR FACILITIES LOCATED IN THE FIELD PRIOR TO ANY WORK BEING DONE. CONTRACTOR SHALL CONTACT UTILITY LOCATION SERVICE PRIOR TO COMMENCEMENT OF WORK.
5. NO DEMOLITION MATERIALS SHALL BE DISPOSED OF ON-SITE. REMOVE EXISTING MATERIALS FROM THE SITE IN ACCORDANCE WITH ALL LOCAL, COUNTY, STATE AND FEDERAL REQUIREMENTS. CONTRACTOR TO PERFORM PREDEMOLITION HAZARDOUS MATERIALS INVENTORY BEFORE BUILDING DEMOLITION.
6. PROTECT ALL STRUCTURES NOT LABELED FOR DEMOLITION FROM DAMAGE DURING ALL PHASES OF CONSTRUCTION. REPAIR ANY DAMAGED STRUCTURES THAT ARE TO REMAIN TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION AT NO ADDITIONAL COST.
7. BARRICADES, SUFFICIENT LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
8. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS.
9. COORDINATE ALL UTILITY RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANIES. PROVIDE UNINTERRUPTED SERVICE TO ALL NEIGHBORING BUILDINGS.

LEGEND

REMOVE GRAVEL

REMOVE CURB

Know what's **below.**
Call before you dig.

40 120
SCALE IN FEET

BA
BAKER ASSOCIATES, INC.
ARCHITECTS

150 South Fifth Street
Suite 1425
Minneapolis, MN 55402–1200
Telephone: 612.339.8601
Fax: 612.339.5668

Porsche of St. Paul
2450 Maplewood Drive
Maplewood, MN 55109

New Construction

Issued:

CDRBA SUBMITTAL

Élan DESIGN LAB
901 N 3rd STREET, SUITE 120
MINNEAPOLIS, MN 55401
p 612.260.7980 | www.elanlab.com
f 612.260.7990

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.

Stephen M. Johnston

NOT FOR CONSTRUCTION

Date: 10/06/2015 Reg No: 18914

Sheet Title

DEMOLITION PLAN

Scale	1" = 40'
Date	10/06/2015
Comm No	BAK15004

Sheet Number C1.4

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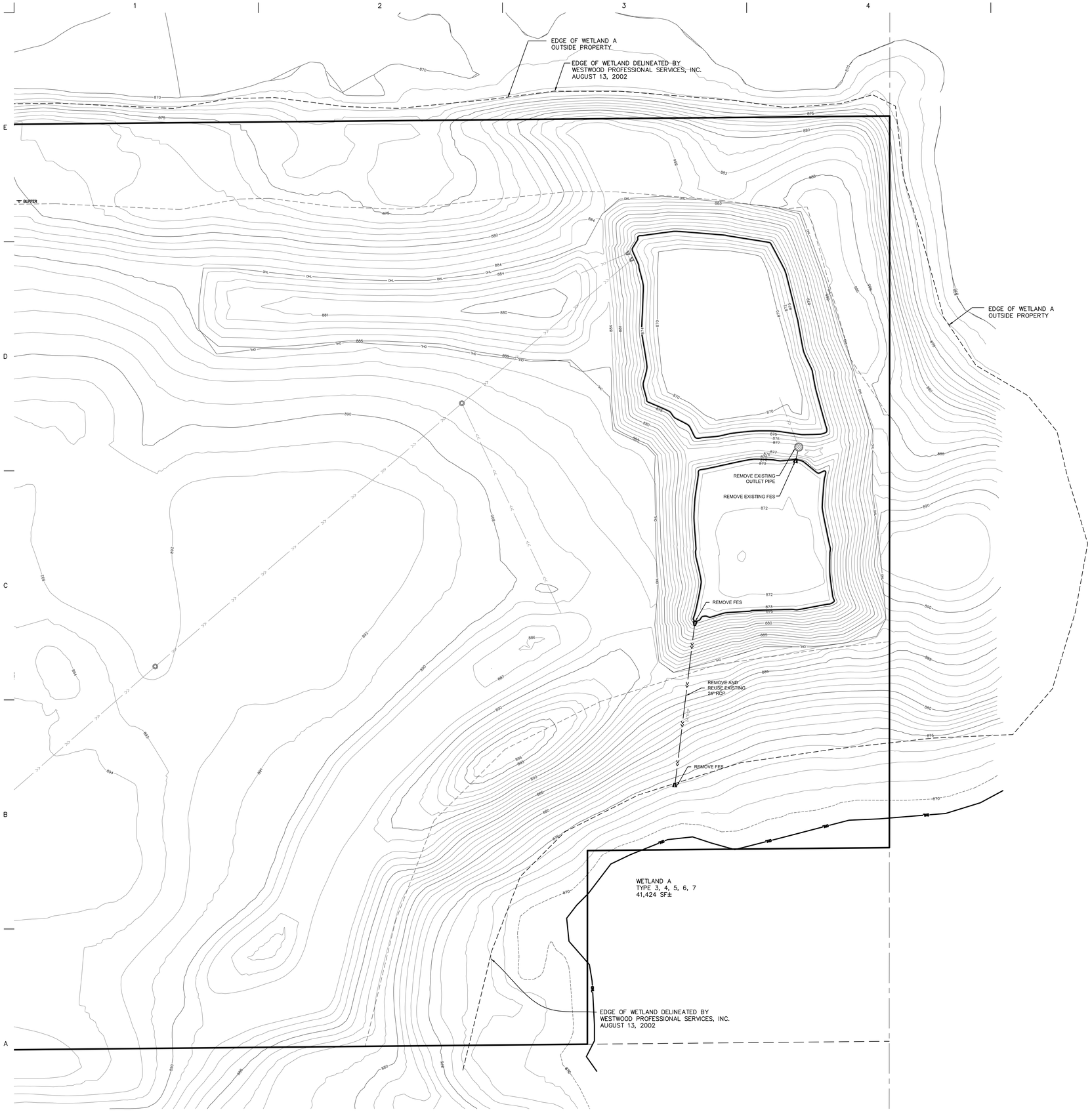

DEMOLITION NOTES

SEE SHEET C1.4 FOR DEMOLITION NOTES.

Know what's **below.**
Call before you dig.

40 120
SCALE IN FEET

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BAKER ASSOCIATES, INC.
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Reg No: 18914

Sheet Title

DEMOLITION PLAN

Scale	1" = 40'
Date	10/06/2015
Comm No	BAK15004

Sheet Number
C1.5

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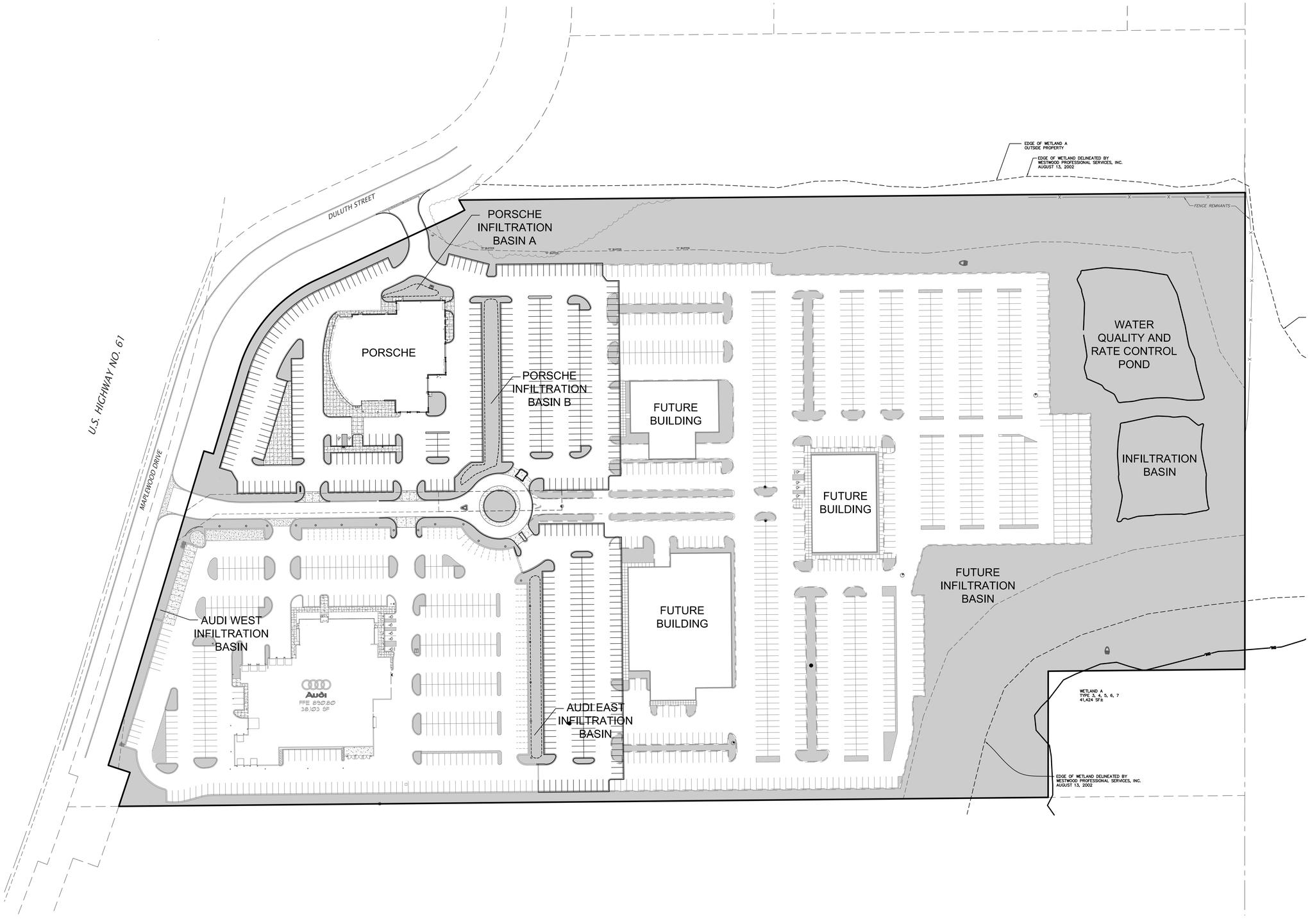
SITE PLAN NOTES

1. DRAWING IS COMPLICATION OF CURRENT PLANS. ORIGINAL PUD DOCUMENTS AND SURVEY PROVIDED BY CORNERSTONE LAND SURVEYING.



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Sheet Title

SITE PLAN PUD

Know what's **below.** Call before you dig.

60 180
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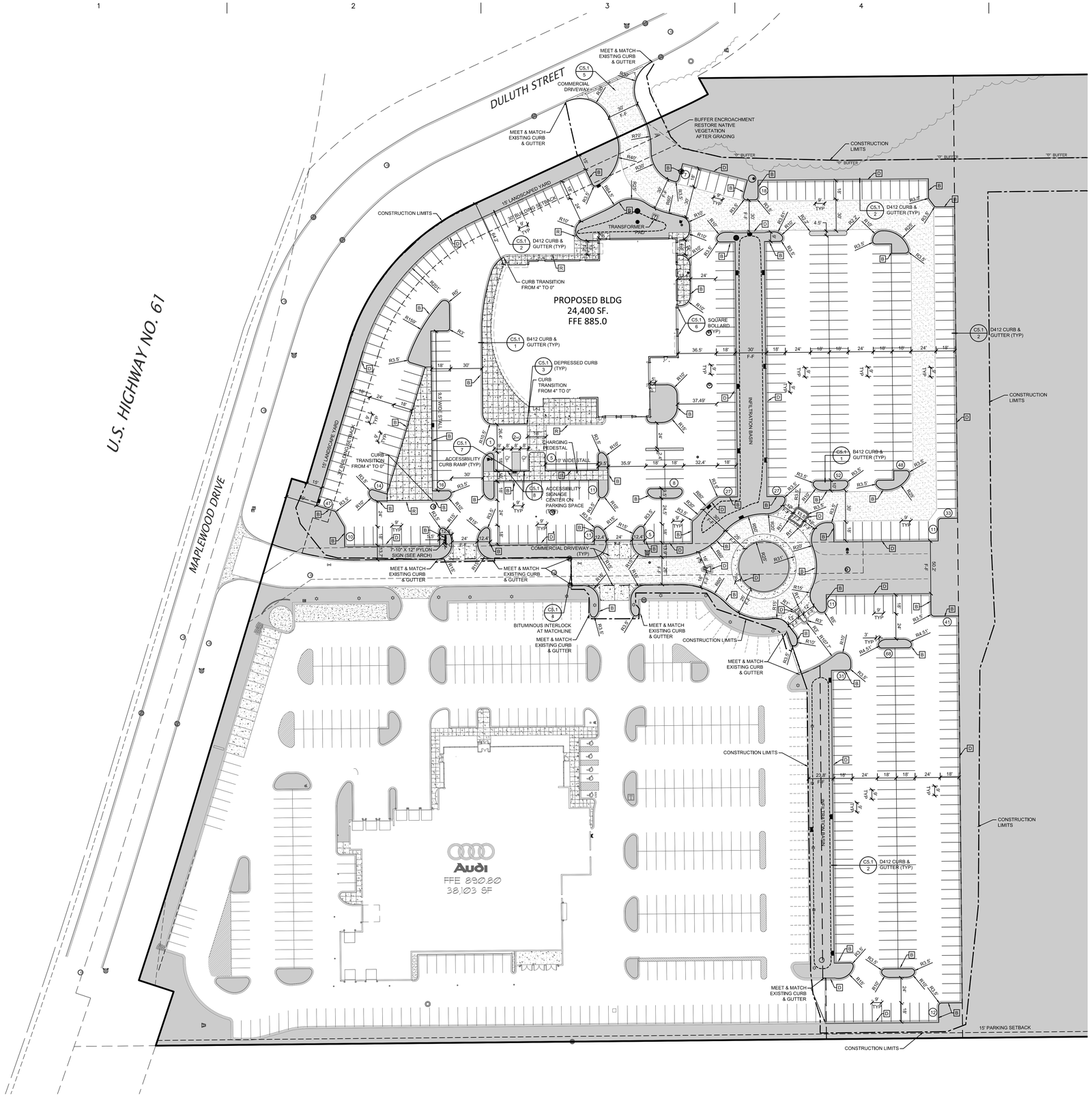

SITE PLAN NOTES

1. BACKGROUND INFORMATION AND TOPOGRAPHIC SURVEY PROVIDED BY CORNERSTONE LAND SURVEYING INC., STILLWATER, MINNESOTA ON SEPTEMBER 9, 2015, EXPRESSLY FOR THIS PROJECT.
2. DIMENSIONS SHOWN ON THIS PLAN ARE TO FACE OF BUILDING AND FACE OF CURB, UNLESS NOTED OTHERWISE.
3. ON-SITE CURB TO BE B412, D412 OR RIBBON CURB.
4. ALL PARKING STALLS TO BE PAINTED WITH A 4" WIDE WHITE STRIPING. ACCESSIBLE SYMBOLS TO BE PAINTED IN WHITE AND ACCESSIBLE ACCESS AISLES TO BE PAINTED WITH A 4" WIDE WHITE PAINTED STRIPE 18 INCHES ON CENTER AND AT 45 DEGREE ANGLES TO STALL. WITH "NO PARKING" MARKED. REFLECTORIZED PAINT SHALL COMPLY WITH MNDOT 3592.
5. MAXIMUM CROSS SLOPE 2.0%. ON ALL WALKS.
6. REMOVE AND/OR REPLACE PAVEMENT, CURB, AND WALK AS REQUIRED TO MAKE CONNECTIONS. MATCH EXISTING STREET SECTION, CURB, AND WALK.

PROJECT SUMMARY

ZONING: PLANNED UNIT DEVELOPMENT

	REQUIRED	PROPOSED
PARKING SETBACKS	15'	15'
BUILDING SETBACK	30' FRONT	64' FRONT

AREA SUMMARY

	OVERALL	PORSCHE SITE
SITE	1,392,411 SF.	309,570 SF.
PROPOSED IMPERVIOUS	896,365 SF. (64%)	234,413 SF. (76%)
BUILDING	123,051 SF. (9%)	24,400 SF. (8%)
PAVEMENT (PARKING & WALK)	773,314 SF. (56%)	210,013 SF. (68%)
PERVIOUS	496,046 SF. (36%)	75,157 SF. (24%)

PARKING SUMMARY

PORSCHE CUSTOMER AND EMPLOYEE PARKING		43 STALLS
CUSTOMER PARKING	5 STALLS	
SERVICE VEHICLES	20 STALLS	
EMPLOYEE PARKING	18 STALLS	
PROPOSED PARKING		522 STALLS
8'X18' ACCESSIBLE	2 STALLS	
9.5'X18' HIGH TURNOVER	16 STALLS	
9'X18' EMPLOYEE AND SERVICE	20 STALLS	
10'X18' CUSTOMER	5 STALLS	
9'X18' INVENTORY	479 STALLS	

LEGEND

- PERVIOUS AREA
- CONCRETE PAVEMENT
- HEAVY DUTY BITUMINOUS PAVEMENT
- B — B412 CURB & GUTTER
- D — D412 CURB & GUTTER
- R — RIBBON CURB

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Stephen M. Johnson

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Date: 10/06/2015 Reg No: 18914

Sheet Title

SITE PLAN PORSCHE

Scale	1" = 40'
Date	10/06/2015
Comm No	BAK15004

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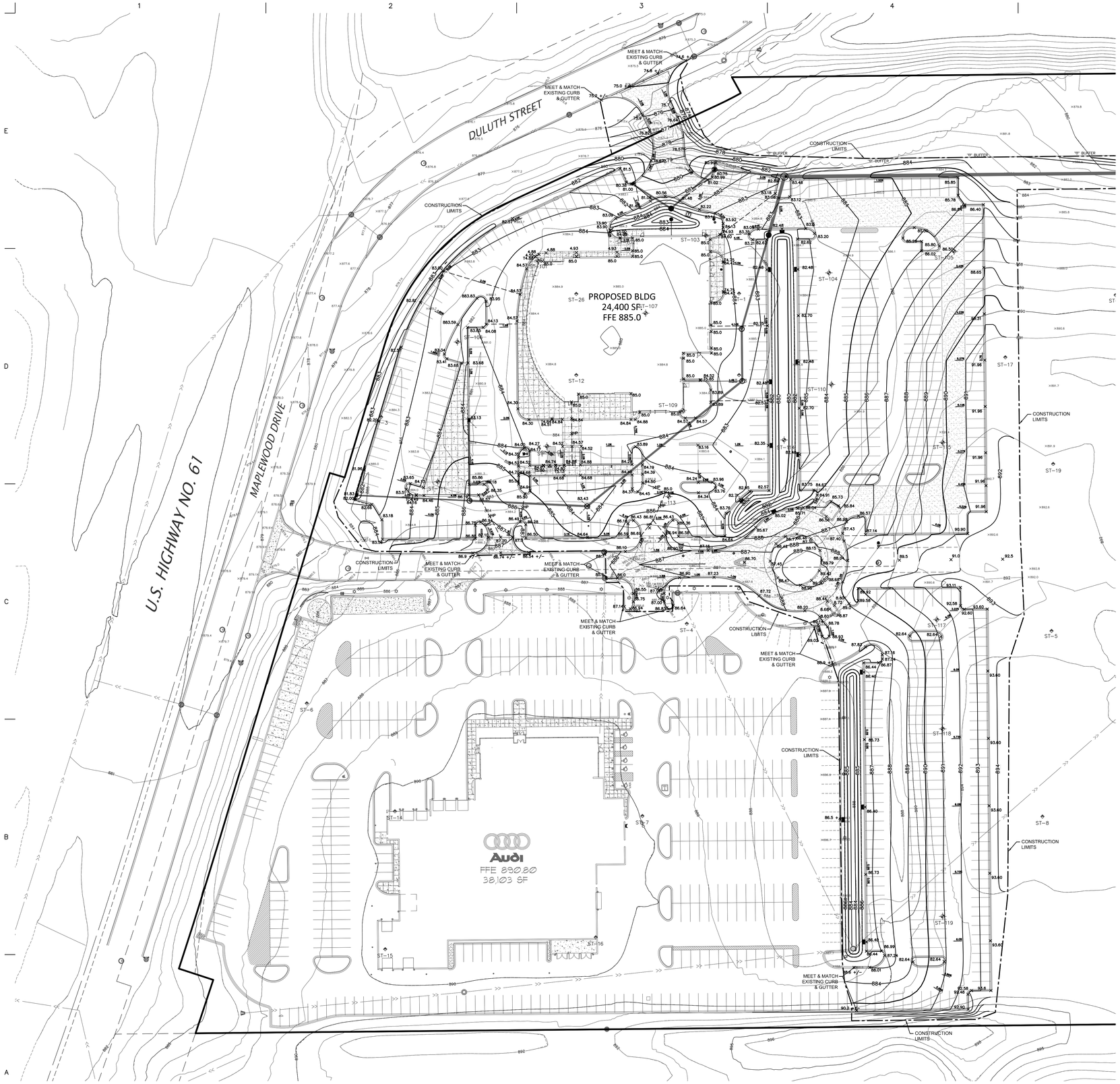

GRADING NOTES

1. BACKGROUND INFORMATION AND TOPOGRAPHIC SURVEY PROVIDED BY CORNERSTONE LAND SURVEYING INC., STILLWATER, MINNESOTA ON SEPTEMBER 9, 2015, EXPRESSLY FOR THIS PROJECT.

2. VERIFY ALL FIELD CONDITIONS AND UTILITY LOCATIONS PRIOR TO EXCAVATION/CONSTRUCTION. IF ANY DISCREPANCIES OR UNKNOWN UTILITIES ARE FOUND THAT IMPACT DESIGN OR IMPAIR CONSTRUCTION, THE ENGINEER AND OWNER SHOULD BE IMMEDIATELY NOTIFIED.

3. ALL WORK TO COMPLY WITH CURRENT MINNESOTA DEPARTMENT OF TRANSPORTATION (MNDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS NOTED.

4. ALL UNDOCUMENTED FILL, AND TOPSOIL SHALL BE REMOVED FROM WITHIN THE PROPOSED BUILDING PAD. A GEOTECHNICAL ENGINEER OR THEIR DESIGNATED REPRESENTATIVE SHALL OBSERVE THE PROJECT EXCAVATIONS TO VERIFY THAT UNSUITABLE MATERIALS HAVE BEEN PROPERLY REMOVED FROM PROPOSED STRUCTURAL AREAS, THAT ADEQUATE BEARING SUPPORT IS PROVIDED BY THE EXPOSED SOILS AND THAT STRUCTURAL FILL IS PLACED APPROPRIATELY. THE EXPOSED SOIL AT THE BASE OF FOOTINGS SHALL BE COMPACTED TO 98 PERCENT PROCTOR DRY DENSITY (ASTM D698).

5. ON-SITE NON-ORGANIC SOIL IS GENERALLY SUITABLE FOR STRUCTURAL FILL. SILTY OR ORGANIC SOILS SHALL NOT BE USED FOR STRUCTURAL FILL. PLACEMENT OF STRUCTURAL FILL SHALL BE OBSERVED AND TESTED BY AN EXPERIENCED TECHNICIAN OR ENGINEER TO VERIFY THAT PROPER COMPACTION HAS BEEN ACHIEVED. STRUCTURAL FILL SHALL BE MOISTURE CONDITIONED (DRIED OR WETTED) AS APPROPRIATE PRIOR TO PLACEMENT. MOISTURE CONDITIONED ENGINEERED FILL SHALL BE PLACED AND COMPACTED IN LOOSE LIFTS OF 8 INCHES OR LESS. EACH LIFT OF FILL SHOULD BE COMPACTED BY LARGE VIBRATORY EQUIPMENT UNTIL THE IN-PLACE SOIL DENSITY IS EQUAL TO OR GREATER THAN THE CRITERIA ESTABLISHED WITHIN THE FOLLOWING TABULATION.

TYPE OF CONSTRUCTION	COMPACTION CRITERIA (% RESPECTIVE PROCTOR)
NON-ENGINEERED FILL (GREEN SPACE)	95
ENGINEERED FILL BELOW FOUNDATIONS	98
ENGINEERED FILL BELOW FLOOR SLABS	98
ENGINEERED FILL PLACED AS PAVEMENT AGGREGATE BASE	100
ENGINEERED FILL PLACED MORE THAN 3 FEET BELOW PAVEMENT AGGREGATE BASE	100
ENGINEERED FILL PLACED IN UPPER 3 FEET BELOW PAVEMENT AGGREGATE BASE	100
UTILITY TRENCHES	100

6. SIDEWALLS SHALL BE BENCHED OR SLOPED TO PROVIDE SAFE WORKING CONDITIONS AND STABILITY FOR ENGINEERED FILL PLACEMENT. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ASSESSING THE STABILITY OF AND EXECUTING PROJECT EXCAVATIONS USING SAFE METHODS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR NAMING THE "COMPETENT INDIVIDUAL" AS PER SUBPART P OF 29 CFR 1926.6 (FEDERAL REGISTER - OSHA). IF SOIL CORRECTION IS REQUIRED IT SHALL EXTEND 3 FEET OUTSIDE OF THE PAVEMENT OR BUILDING LIMITS PLUS ONE FOOT HORIZONTAL FOR EVERY VERTICAL FOOT OF CORRECTION.

7. THE CONTRACTOR SHALL PROTECT THE SUBGRADE FROM INCLEMENT WEATHER TO MAINTAIN STABILITY. FOLLOWING REMOVAL OF TOPSOIL, PAVEMENT, AND ANY UNSUITABLE SOILS, THE RESULTING SUBGRADE SHOULD BE SCARIFIED AND RE-COMPACTED TO A DEPTH OF 12 INCHES. A PROOFROLL TEST SHOULD THEN BE PERFORMED TO DETERMINE SOFT OR UNSTABLE SUBGRADE AREAS. IF RUTTING OR LOCALIZED UNSTABLE SUBGRADE AREAS ARE OBSERVED, THOSE AREAS SHOULD BE SUBCUT, MOISTURE-CONDITIONED, AND RE-COMPACTED OR REMOVED TO A STABLE DEPTH. THE PROOF ROLL SHOULD BE PERFORMED WITH A TANDEM AXLE DUMP TRUCK LOADED TO GROSS CAPACITY (AT LEAST 20 TONS). ACCEPTANCE CRITERIA OF THE PROOF ROLL SHALL BE LIMITED TO RUT FORMATION NO MORE THAN ONE INCH (1") DEPTH (FRONT OR REAR AXLES) AND NO PUMPING (ROLLING) OBSERVED DURING THE VISUAL INSPECTION. PROOF ROLL TESTS SHOULD BE OBSERVED BY AN EXPERIENCED TECHNICIAN OR ENGINEER PRIOR TO PLACEMENT OF THE AGGREGATE BASE COURSE TO VERIFY THE SUBGRADE WILL PROVIDE ADEQUATE PAVEMENT SUPPORT.

8. PAVEMENT

HEAVY DUTY BITUMINOUS PAVEMENT
- 2.0" BITUMINOUS WEAR (MNDOT 2360 TYPE 9.5
- WEARING COURSE MIXTURE (2.B) SPWEA340B)
- TACK COAT (MNDOT 2357)
- 2.5" BITUMINOUS NON-WEAR (MNDOT 2360 TYPE 12.5
- NON-WEARING COURSE MIXTURE (2.B) SPNWB330B)
- 10" AGGREGATE BASE (MNDOT 3138 CL5 OR CL7)
- COMPACTED SUBGRADE

BITUMINOUS PAVEMENT
- 1.5" BITUMINOUS WEAR (MNDOT 2360 TYPE 9.5
- WEARING COURSE MIXTURE (2.B) SPWEA340B)
- TACK COAT (MNDOT 2357)
- 2.0" BITUMINOUS NON-WEAR (MNDOT 2360 TYPE 12.5
- NON-WEARING COURSE MIXTURE (2.B) SPNWB330B)
- 8" AGGREGATE BASE (MNDOT 3138 CL5 OR CL7)
- COMPACTED SUBGRADE

CONCRETE PAVEMENT
- 6.0" CONCRETE (SEE BELOW)
- 4" AGGREGATE BASE (MNDOT 3138 CL5 OR CL7)
- COMPACTED SUBGRADE
- #4 BAR 24" O.C. BOTH DIRECTIONS (MNDOT 3301)

CONCRETE WALKWAYS
- 5.0" CONCRETE WALK (SEE BELOW)
- 4" AGGREGATE BASE (MNDOT 3138 CL5 OR CL7)
- COMPACTED SUBGRADE

9. CONCRETE MIX NO. 3A32 MNDOT 2461.3 SHALL BE USED FOR HAND PLACED FORMED CURB AND GUTTER, MEDIANS, DRIVEWAYS, CROSS GUTTERS, SIDEWALKS, PEDESTRIAN RAMPS AND MEDIANS. CONCRETE MIX NO. 3A22, MNDOT SPECIFICATION 2461.3 SHALL BE USED FOR AN EXTRUSION MACHINE PLACEMENT OF CONCRETE. IN THE PRODUCTION OF CONCRETE, AN AIR ENTRAINING AGENT SHALL BE ADDED TO THE MIX ACCORDING TO MNDOT 2461.4.

10. FORM COATING MATERIAL SHALL MEET MNDOT 3902.

11. CONCRETE INSTALLATION SHALL CONFORM WITH MNDOT 2531.

12. SITE CONCRETE FINISHING - CONCRETE SHALL BE STRUCK TRUE TO CROSS SECTION AS SHOWN ON THE PLANS. NO ADDITIONAL WATER MAY BE ADDED TO AID IN THE FINISHING PROCESS. A LIGHT BROOM FINISH WILL BE REQUIRED AT RIGHT ANGLES TO THE CENTER LINE ON ALL CONCRETE WORK UNLESS DIRECTED OTHERWISE. ALL EXPOSED EDGES AND JOINTS IN CURB,GUTTER, SIDEWALK AND STEPS SHALL BE ROUNDED WITH A SUITABLE EDGING TOOL. BEFORE FINAL FINISHING, THE CONTRACTOR SHALL CHECK THE CONCRETE WITH A TEN (10) FOOT STEEL STRAIGHT EDGE TO ENSURE THERE IS NO VARIATION GREATER THAN 3/16"FROM THE STRAIGHT EDGE ON TANGENT LINES OR GRADES. IF DEVIATIONS GREATER THAN 3/16" ARE FOUND THE WORK WILL BE CONSIDERED AS UNACCEPTABLE AND WILL BE REQUIRED TO BE REMOVED AND REPLACED AT NO EXPENSE TO THE OWNER.

13. CONCRETE CURING SHALL BE PERFORMED BY APPLYING A MEMBRANE CURING COMPOUND (TYPE 2, WHITE PIGMENTED, MNDOT 3754) TO THE EXPOSED SURFACE OF THE CONCRETE WITHIN ONE (1)HOUR AFTER FINISHING THE CONCRETE SURFACES. WHEN THE FORMS ARE REMOVED IN LESS THAN 72 HOURS AFTER PLACING THE CONCRETE, THE CURING COMPOUND SHALL BE APPLIED IMMEDIATELY TO THE EXPOSED SURFACES, OR THE TRENCHES SHALL BE BACKFILLED IMMEDIATELY WITH SUITABLE BACKFILL MATERIAL. THE RATE OF APPLICATION OF CURING COMPOUND SHALL BE 150 SQUARE FEET PER GALLON. THE COMPOUND SHALL APPEAR AS WHITE AS A SHEET OF PAPER AFTER APPLICATION ON THE CONCRETE SURFACE.

14. PREFORMED EXPANSION JOINTS SHALL MEET MNDOT 3702, AND SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS: AT THE BEGINNING AND END OF ALL CURB AND GUTTER RADII. WHERE NEW CONCRETE SURROUNDS, ADJOINS, OR ABUTS ANY EXISTING FIXED OBJECTS SUCH AS FIRE HYDRANTS, BUILDING FOUNDATIONS, CONCRETE DRIVEWAYS, SIDEWALKS, AND OTHER RIGID STRUCTURES. AFTER EACH LOAD OF CONCRETE WHEN PLACING CURB AND EVERY 100 FEET WHEN PLACING SIDEWALK. CONTRACTION JOINTS WILL NOT BE SEALED BUT WILL BE REQUIRED AT A SPACING OF 10 FEET ON CURB AND GUTTER AND ON SIDEWALK CONSTRUCTION AS SHOWN ON THE PLAN. CONTRACTION JOINTS WILL BE CUT TO A DEPTH 1/3 THE THICKNESS OF THE CONCRETE, SURFACE AND BACK OF ALL CURBS. CONTRACTION JOINTS SHALL BE PLACED SO THAT NO SLAB IS LARGER THAN 100 SQUARE FEET IN AREA. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING CONTRACTION JOINTS THAT PREVENT CONCRETE FROM CRACKING AT OTHER LOCATIONS.

15. CONCRETE TESTING INCLUDING SLUMP, AIR ENTRAINMENT, TEMPERATURE AND COMPRESSIVE STRENGTH SHALL BE PERFORMED ON THE FIRST LOAD OF THE DAY FOR ALL CONCRETE POURS OF AT LEAST 4 CUBIC YARDS. AN ADDITIONAL TEST SHALL BE PERFORMED FOR EACH 100 CUBIC YARDS OR PORTION THEREOF.

16. AGGREGATE BASE FINAL SHAPING AND COMPACTION OF THE AGGREGATE BASE SHALL BE DONE JUST PRIOR TO CONSTRUCTION OF THE PLANT MIX BITUMINOUS SURFACE. THE FINISHED SURFACE OF THE BASE SHALL SHOW NO VARIATION GREATER THAN 1/2 INCH FROM A TEN (10) FOOT STRAIGHT EDGE.

17. PLANT MIXED BITUMINOUS MIXTURE SHALL BE SPREAD WITHOUT SEGREGATION, AT THE SPECIFIED RATE TO THE CROSS SECTION SHOWN IN THE PLANS AND PER MNDOT 3151.

18. THE THICKNESS OF EACH BITUMINOUS COURSE SHALL BE WITHIN 1/4 INCH OF THE THICKNESS AS SHOWN ON THE PLANS. THE TOTAL THICKNESS OF ALL BITUMINOUS COURSES SHALL BE WITHIN 1/2 INCH.

19. ADJUST ALL SURFACE COURSES TO NOT GREATER THAN ¼" ABOVE ADJACENT CURB FRONT EDGES WHERE WATER FLOWS TO CURB, AND FLUSH WHERE WATER FLOWS AWAY FROM CURB, OR ½" ABOVE MANHOLE FRAMES, VALVE BOXES OR OTHER FIXED STRUCTURES.

20. PRIOR TO CONSTRUCTING THE BITUMINOUS BINDER AND/OR WEARING COURSES, THE CONTRACTOR SHALL SWEEP THE PARKING LOT. THE SWEEPER SHALL BE A SELF-PROPELLED PICK-UP (WITH WATER) SWEEPER. A SIDE-THROW SWEEPER WILL NOT BE ALLOWED.

21. TACK COAT SHALL CONFORM TO MNDOT 2357.2.A.

22. BITUMINOUS PAVEMENTS SHALL BE COMPACTED TO 92% OF THE MAXIMUM THEORETICAL DENSITY. THE OWNER MAY AT THEIR OPTION PERFORM AGGREGATE AND BITUMINOUS TESTING. THE COST OF ALL FAILING TESTS MAY BE BACK-CHARGED TO THE CONTRACTOR.

INFILTRATION BASIN CONSTRUCTION NOTES

1. REMOVE EXISTING FILL AND CL SOIL TO EXPOSE UNDERLYING SM OR SP-SM SOIL.
2. FILL TO PROPOSED GRADE MINUS 0.25 FEET WITH SP SOIL. SP SOIL FOUND ON SITE MAY BE BORROWED FOR THIS PURPOSE.
3. DO NOT PLACE FINAL SOIL MIXTURE UNTIL SITE IS PAVED AND LANDSCAPING IS COMPLETE.
4. FOLLOWING SITE STABILIZATION REMOVE ALL SILT AND CONTAMINATED SP SOIL.
5. RETURN INFILTRATION BASIN TO MINUS 0.25 FROM FINAL GRADE WITH SP SOIL.
6. FILL REMAINING 0.25 FEET WITH A MIXTURE OF SANDY LOAM AND COMPOST.
7. VERIFY MINIMUM INFILTRATION RATE OF 0.8 INCHES PER HOUR WITH DOUBLE RING INFILTROMETER.
8. INSTALL LANDSCAPING PER PLAN.

LEGEND

CONSTRUCTION LIMITS

HEAVY DUTY BITUMINOUS PAVEMENT

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Date: 10/06/2015
Reg No: 18914

Sheet Title
GRADING PLAN

Scale	1" = 40'
Date	10/06/2015
Comm No	BAK15004

Sheet Number
C3.1

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GRADING NOTES

SEE SHEET C3.1 FOR GRADING NOTES

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Sheet Title

GRADING PLAN

Scale	1" = 40'
Date	10/06/2015
Comm No	BAK15004

Sheet Number
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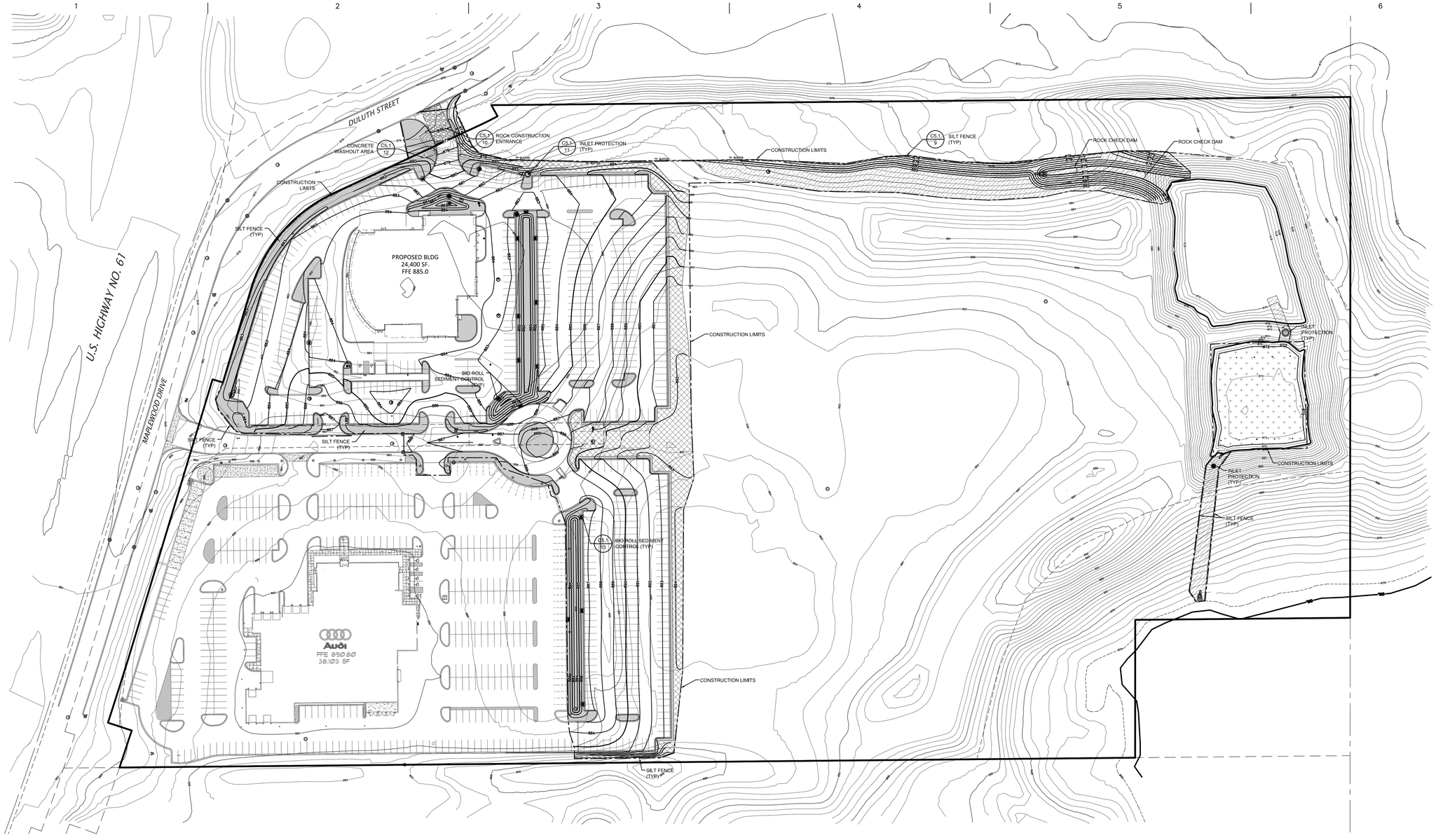

LEGEND

- CONSTRUCTION LIMITS
- SILT FENCE
- BIO ROLL SEDIMENT CONTROL
- STORM STRUCTURE PROTECTION
- SOD & LANDSCAPE PLANTING
- TURF SEED MIXTURE
  MNDOT MIXTURE 25-131 LOW MAINTENANCE TURF
  BROADCAST SEEDING
  SEEDING RATE PLS 220 LBS/AC.
- MESIC PRAIRIE GENERAL
  MNDOT MIXTURE 35-241 MESIC PRAIRIE GENERAL
  BROADCAST SEEDING
  TEMPORARY - MIXTURE 21-111 OATS COVER CROP
  SEEDING RATE PLS 36.5 LBS/AC.
- FILTRATION BASIN SEED MIXTURE
  MNDOT MIXTURE 33-261 STORMWATER SOUTH & WEST
  BROADCAST SEEDING
  TEMPORARY - MIXTURE 21-111 OATS COVER CROP
  SEEDING RATE PLS 35 LBS/AC.
- RIP RAP

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Date: 10/06/2015
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Sheet Title

EROSION CONTROL PLAN

Scale	1" = 60'
Date	10/06/2015
Comm No	BAK15004

Sheet Number
C3.3

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Project Name / Location

Project Name	Porsche of St. Paul
Project Address	2xxx W Maplewood Dr., Maplewood, MN 55109
Property ID	TBD
Latitude / Longitude	45.0165, 93.0508
Project Type	Commercial

Contacts

Owner	Contractor (Operator)	Preparer
TCA Real Estate, LLC	TBD	Steve Johnston, PE
Wayne Pisinski		Élan Design Lab, Inc.
15802 Wayzata Boulevard		901 N 3rd St. #120
Minnetonka, MN 55391		Minneapolis, MN 55401
952-303-7531		612-260-7982
WPisinski@carouselmotor.com		sjohnston@elanlab.com

General SWPPP Responsibilities

The Contractor (Operator) shall provide a knowledgeable and experienced person(s) to oversee the implementation of the SWPPP and the installation. Inspection and maintenance of the erosion and sediment control BMP's before and during construction. Training must be in conformance with the NPDES Construction Permit requirements. Training documentation must kept on-site with the SWPPP and the trained person must be available on-site within 72 hours.

Both the Owner and Contractor (Operator) shall be responsible for the proper termination and/or transfer of the permit.

The owner will be responsible for the long term operation and maintenance of the permanent storm water management system(s).

Unless specifically stated the engineer shall have no responsibility for any SWPPP activities during or after construction.

Project Description

The project consists of the construction of a new 24,400 ft^2 building and associated parking lot on a vacant 7.1acre site. The project creates 5.38 acres of new impervious surface. A total of 8.6 acres will be disturbed.

The site is part of an Auto Mall Planned unit development approved in 2005. To date only one of five approved buildings have been constructed. The proposed project includes the construction of the new building and parking, as well as the reconstruction of non-conforming stormwater management facilities.

Soils

The geotechnical report prepared for the project by Braun Intertec is hereby incorporated into the SWPPP. The site was previously mass graded. The existing soils include a mixture of cohesive and fine grained sand soils.

Receiving Waters

Water Body ID	Name of Water Body	Type	Special Water	Impaired Water
62-152W	Gerten Pond	wetland	no	yes

In order to convert the non- functioning infiltration basin into a filtration basin a de minimis amount of this wetland will be disturbed to install a storm sewer pipe. No work will take place below the OHWL.

Project Plans

The following plan sheets are hereby incorporated into this SWPPP

Sheet Number	Description	Date
C3.1	Grading Plan	TBD
C3.2	Grading Plan	TBD
C3.3	Erosion Control Plan	TBD
C3.4	Storm Water Management Plan	TBD
C4.1	Utility Plan	TBD
C4.2	Utility Plan	TBD
C5.1	Details	TBD
C5.2	Details	TBD
C5.3	Details	TBD

Related Reviews and Permits

Agency	Type of Permit or Review	Status
City of Maplewood	Site plan, Storm Water Management, Building Permit	Pending
Brown's Creek Watershed District	Storm Water Management, Erosion Control	Pending
MPCA	NPDES Site Construction	Pending

Stormwater Management System Overview

The Storm Water Management System incorporates five infiltration areas spread though out the site that provide a portion of the required extraction. These infiltration basins have been placed in locations where there are suitable soils at or near the surface. The overflows from these basins combines with surface runoff from other areas and is directed via storm sewer to the existing wet treatment pond originally constructed to NURP standards. This pond overflows to a non-functioning infiltration basin that will be converted to a filtration basin as part of this project. Assuming 50% credit for the filtration volume the system provides volume control for more than 1.1 inches of runoff from the impervious areas of the site.

Erosion Prevention Measures - General

The Contractor (Operator) is responsible for all erosion prevention measures for the project including but are not limited to the following:

1. The Contractor (Operator) shall plan and implement appropriate construction practice and construction phasing to minimize erosion and retain vegetation whenever possible
2. All areas not to be disturbed shall be delineated with flags, stakes, signs, or other means necessary to protect these areas before construction begins on the site.
3. All drainage ditches and/or swales shall have temporary or permanent stabilization within 24 hours of connecting to a surface water or 24 hours after construction activity in the ditch/swale has temporarily or permanently ceased.
4. All pipe outlets shall have temporary or permanent energy dissipation within 24 hours of connecting to a surface water.
5. All exposed soils shall be stabilized as soon as possible to limit soil erosion. In no case shall un-worked areas, including stock piles, have exposed soils for more than 14 days with providing temporary or permanent stabilization. (7 days for projects with a receiving water that is impaired or special)

Sediment Control Measures and Timing - General

The Operator (Contractor) is responsible for all sediment control measures for the project. Sediment control measures include but are not limited to the following:

1. Sediment control measures shall be established on all down gradient perimeters before any up-gradient land disturbing activities begin. These measures shall remain in place until final stabilization has been established.
2. On slopes with 3:1 or steeper grades there shall be no unbroken slope length greater than 75 feet.
3. All storm drain inlets and culvert inlets shall be protected by an appropriate BMP during construction until all sources with potential for discharging to the inlet has been stabilized. Inlet and culvert protection shall conform to the MnDOT Specifications 2573 and 3891.
4. Stock piles shall be provided with an effective sediment perimeter control and shall not be placed in any type of surface water or drainageway.
5. Vehicle tracking shall be minimized with effective BMP's. Where the BMP's fail to prevent sediment from tracking onto streets the Contractor shall conduct street sweeping to remove all tracked sediment.
6. The Operator is responsible for identifying the need for temporary sediment basins based on actual field conditions to protect downstream resources. Temporary sediment basins shall be constructed before up gradient vegetation is disturbed and maintained until the risk of damage to downstream resources is mitigated by other means.

Dewatering and Basin Draining Activities - General

The Operator is responsible for adhering to all dewatering and surface drainage regulations, including but not limited to the following:

1. Whenever possible water from dewatering activities shall discharge to a temporary and/or permanent sediment basin.
2. If water cannot be discharged to a sedimentation basin, it shall be treated with other appropriate BMP's, to effectively remove sediment.
3. All discharge points shall be protected from erosion and scour.
4. Discharge water shall be dispersed over an effective energy dissipation measure.
5. All water from dewatering shall be discharged in a manner than does not cause nuisance conditions, erosion, or inundation of wetlands. Water shall not be discharged to adjacent residential properties. It must be discharged to the public street.

Final Stabilization - General

The Operator is responsible for ensuring final stabilization of the site, including but is not limited to the following:

1. All soil disturbing activities have been completed.
2. All exposed soils have been uniformly stabilized with at least 80% vegetation coverage.
3. All drainage ditches, ponds and all storm water conveyance systems have been cleared of sediment and stabilized to preclude erosion.
4. All temporary BMP's have been removed and properly disposed.
5. Final stabilization shall be performed in accordance with MnDOT Specification 2515.

Temporary Sediment Basin

During construction the contractor shall excavate and maintain temporary sediment basins as needed to prevent sediment from leaving the site. Runoff shall be directed to the existing treatment pond and not towards city streets or the adjacent wetland or buffer.

The temporary ponds shall remain until vegetation is fully established in upstream areas and in the infiltration basins. The temporary basins shall be cleaned whenever more than 1/3 of the storage volume is lost due to sedimentation.

Construction Sequencing

Contractor shall comply with the following sequence. The Contractor may make adjustments to the sequence if needed to address actual field conditions.

1. Install silt fence at as indicated on the plan.
2. Install rock construction entrance.
3. Construct ditch from active construction area to east to provide positive drainage away from adjacent streets and the wetland and wetland buffer.
4. Excavate temporary sedimentation basins
5. Provide erosion control seeding around temporary sedimentation basins
6. Strip topsoil, salvaging the best quality for reuse and using the balance as non-structural embankment. Minimize disturbance to infiltration areas.
7. Mass grade site. Excavate cohesive soils from infiltration basins and replace with SP soil.
8. Provide erosion control seeding and mulch where active construction is not taking place.
9. Construct building and parking lots.
10. Install landscaping, sod and permanent turf seed.
11. Replace silt fence on all downstream gradients with bio-degradable bio logs.
12. Remove silt and contaminated SP soil and then return infiltration basins to final grade minus 3 inches.
13. Import leaf compost and mix 50-50% with sandy loam. Use this material to bring infiltration basin to final grade.
14. Test infiltration rate with Double Ring Infiltrometer.
15. Landscape infiltration basins per plan
16. Sod or seed and mulch any remaining disturbed areas.
17. Monitor vegetation and reinstall as needed until fully established.
18. File NPDES Notice of Termination ("NOT") with MPCA within 30 days of final stabilization.

Inspection and maintenance

All inspections, maintenance, repairs, replacements and removal are to be considered incidental to the BMP bid items.

The Contractor (Operator) is responsible for completing required inspections maintenance and observation of weather conditions and rainfall amounts to ensure compliance with the permit requirements. The Contractor (Operator) shall observe the construction site once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours.

The Contractor (Operator) shall keep a summary maintenance/construction observation report to be recorded after each site visit/observation. The Contractor (Operator) shall submit a copy of the written inspections monthly to the Owner. Records shall include the following:

1. Date and time of inspections
2. Name of person conducting inspection
3. Findings and recommendations for corrective actions if necessary
4. Corrective actions taken
5. Date and amount of rainfalls greater than 0.5 inches in 24 hours
6. Mention of any changes made to the SWPPP
7. A site map indicating active construction areas and land disturbing activities.

The Contractor (Operator) must keep the SWPPP, all inspection reports and amendments onsite. The Contractor (Operator) shall designate a specific location to keep the records whenever construction activity is in progress.

All erosion prevention and sedimentation control BMP's must be inspected to ensure integrity and effectiveness. All nonfunctional BMP's must be repaired, replaced or supplemented with functional BMP's. The Contractor (Operator) must investigate and comply with the following inspection and maintenance requirements:

1. All sediment barriers including silt fence, bio-logs, and similar devices must be repaired replaced or supplemented when they become nonfunctional or the sediment reaches 1/3 of the barrier height. These repairs shall be made within 24 hours of discovery.
2. Temporary and permanent sediment basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches 1/2 the storage volume. Drainage and removal must be completed within 72 hours of discovery.
3. Surface waters, including drainage ditches and conveyance systems, must be inspected for evidence of erosion and sediment deposition. The Operator shall remove all deltas and sediment deposited in surface waters, including drainage ways, catch basins, and other drainage systems. The Operator shall re-stabilize the areas where sediment removal results in exposed soil. Removal and stabilization must take place within 7 days of discovery, unless precluded by legal, regulatory or physical constraints. The Contractor (Operator) is responsible for contacting all local, regional, state and federal authorities and receiving any applicable permits, prior to conducting any work.
4. Construction site vehicle exit locations shall be inspected daily for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all paved surfaces within 24 hours of discovery.
5. The Contractor (Operator) is responsible for the operation and maintenance of temporary and permanent water quality BMP's. As well as erosion and sediment control BMP's for the duration of the construction work at the site.
6. If sediment escapes the construction site, all off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts.
7. All filtration areas must be inspected to ensure that no sediment from ongoing construction activities is reaching the filtration areas and these areas are protected from compaction due to construction equipment driving across the filtration area.

Pollution Prevention Management Measures

The Contractor (Operator) shall be responsible for all pollution prevention management measures. The Contractor (Operator) is responsible for informing all visitors and/or personnel on-site of the pollution prevention management measures.

All pollution prevention management measures are to be considered incidental to the overall project bid, unless otherwise noted. Pollution prevention management measures include but are not limited to the following:

1. The Contractor (Operator) is responsible for the proper disposal, in compliance with MPCA disposal requirements, of all solid or liquid waste and hazardous materials on-site.
2. Concrete trucks shall not be allowed to wash out or discharge surplus concrete or drum wash water on-site, unless done in an engineered leak-proof containment system. The engineered system provided by the Contractor (Operator) must include site drawings for the project file and written assurance that the system will work as designed and leave no discharge of concrete or concrete residue potential to waters of the state during a minimum of a 100-year storm event. A sign must be installed adjacent to each washout system to inform concrete equipment Operators to utilize the proper facilities. The concrete washout containment system and all related items shall be considered incidental to the project bid.
3. All nonhazardous waste materials shall be collected and stored in a securely lidded metal dumpster or other approved containment method at the end of each day. Any alternative to a metal dumpster must be submitted in writing for approval by the project engineer. The dumpster shall be emptied as necessary to function as intended for debris collection. No construction garbage or waste material shall be buried on-site.
4. A licensed sanitary waste management Contractor shall collect all sanitary waste from the portable units at a rate necessary to maintain designed function.
5. All fertilizers shall be stored in a covered shelter. Partially used bags shall be transferred to a sealable bin to reduce the chance of spillage.
6. External washing of trucks and other construction vehicles and engine degreasing are prohibited at the construction site. All vehicles on-site shall be monitored for leaks and receive regular prevention maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers. Which are clearly labeled. Spill kits shall be included with all fueling sources and maintenance activities. Secondary containment measures shall be installed and maintained by the Operator.
7. Any asphalt substances used on-site shall be applied in accordance with manufacturer's recommendations.
8. All paint containers and curing compounds shall be tightly sealed and stored when not required for use. Excess paint and/or curing compounds shall not be discharged into the storm sewer system and shall be properly disposed of according to manufacturer's instruction.
9. Materials and equipment necessary for spill clean-up shall be kept in an enclosed trailer or shed on-site. Equipment shall include. But not limited to, brooms, mops, dust pans, rags, gloves, goggles, absorbent (kitty litter) oil absorbent booms and diapers and buckets.
10. All spills shall be contained and cleaned up immediately upon discovery. Spills large enough to reach the storm water conveyance system shall be reported to the Minnesota duty officer at 1-800-422-0798.

Quantities

Practice	Detail / Spec.	Unit	Quantity
Standard Silt Fence		LF	
Bio Log		LF	
Rock Construction Entrance		Each	
Inlet Protection - Standard		Each	
Erosion Control Seed Mix 21-111	MnDOT 2575	SY	
Mesic General Roadside Seed Mix 25-141	MnDOT 2575	SY	
Infiltration Basin Seed Mix 33-261	MnDOT 2575	SY	
Turf Seed Mix 25-131	MnDOT 2575	SY	
Fiber Blanket	MnDOT 3885	SY	
Hydro Mulch	MnDOT 3882	SY	
Sod	MnDOT 3878	SY	

Post Construction Operation and Maintenance

Infiltration basin shall be monitored after each rainfall of 0.5" or greater to verify basin is dry with 48 hours or less.

Infiltration soil performance shall be periodically inspected through cleanouts to confirm infiltration is occurring. Contact engineer if standing water is observed in pipe.

Rain Guardians shall be inspected and cleaned monthly for sediment accumulation. More frequent inspection is required during the spring snow melt and autumn leaf fall. Owner is strongly encouraged to vacuum sweep entire lot each spring before spring rains wash sediment.

Sediment and debris must be disposed in an appropriate location that will not drain to any surface waters.

The entire stormwater management area should be mowed every other year to prevent voluntary tree growth.

Noxious weeds shall be removed from the site on an annual basis before they go to seed.

Amendments to the SWPPP

The SWPPP will be amended as needed and/or as required by provisions of the permit. Amendments will be approved by both the Owner and Contractor (Operator) and will be attached to the SWPPP as an additional sheet. The SWPPP and amendments will be kept on site by the Contractor (Operator) whenever construction activity is in progress.

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Stephen M. Johnston

NOT FOR CONSTRUCTION

Date: 10/06/2015

Reg No: 18914

Sheet Title

SWPPP PLAN

Scale	PER SHEET
Date	10/06/2015
Comm No	BAK15004

Sheet Number C3.4

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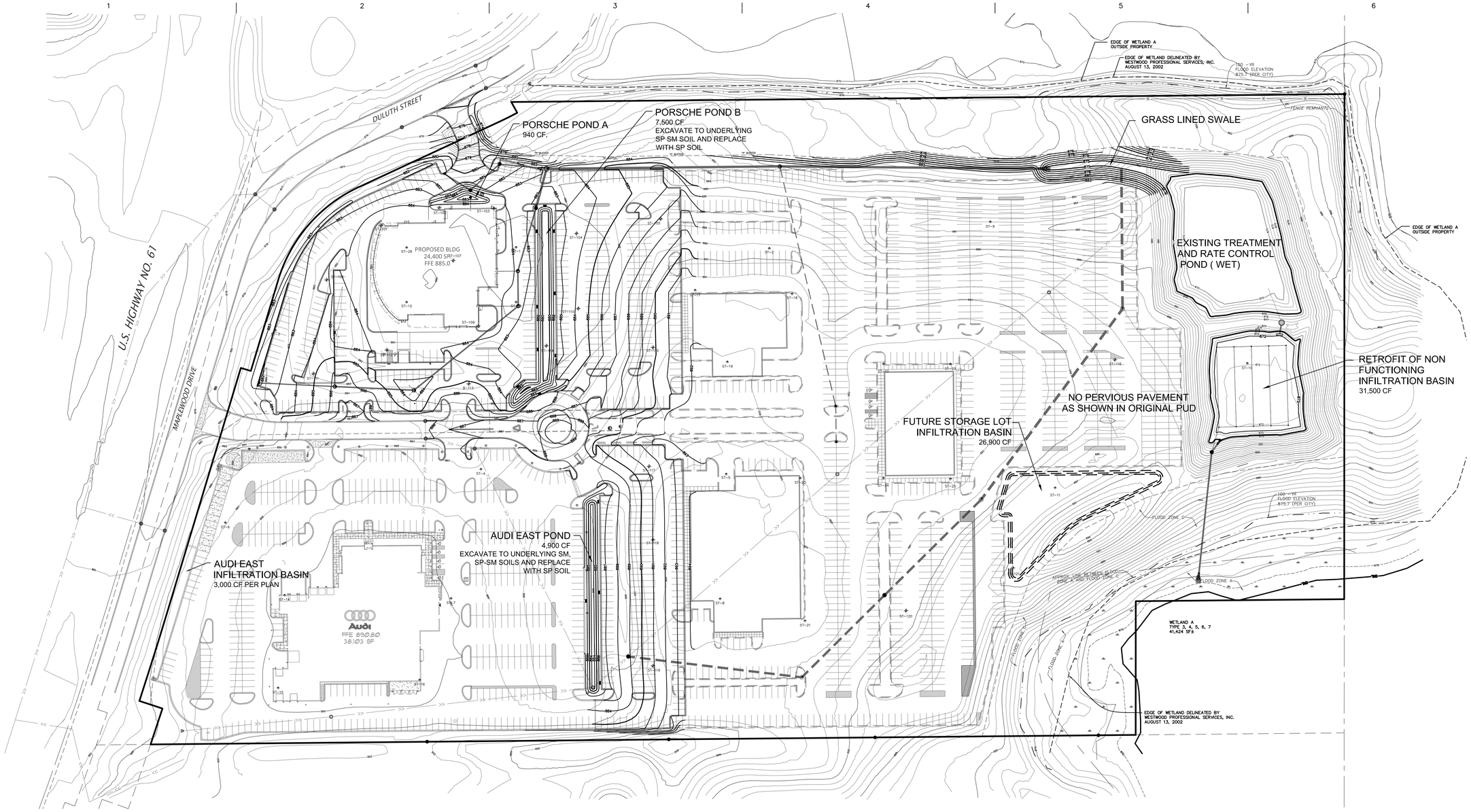

INFILTRATION BASIN CONVERSION TO FILTRATION BASIN

1. DRAIN
2. REMOVE EXISTING VEGETATION
3. GRADE TO UNIFORM BOTTOM ELEVATION OF 871.75.
4. 4.REMOVE AND REINSTALL STORM SEWER PER PLAN.
5. INSTALL 6" PERFORATED PVC UNDERDRAIN PER MPCA GUIDELINES.
6. PLACE 2.25' OF GW, GP, GM OR SW SOIL TO ELEVATION 874.0.
7. PLACE 0.25' OF MIXTURE OF SANDY LOAM TOPSOIL AND COMPOST.
8. SEED PER PLAN.

VOLUME CALCULATION - FILTRATION VOLUME STORED IN BOTH CELLS

CONTOUR	SURFACE AREA	VOLUME
874.3	49,000 SF	
875.0	52,300 SF	35,500 CF
876.0	56,700 SF	54,500 CF
TOTAL		90,000 CF
CREDIT	X 50%	45,000 CF

FILTRATION BASIN SURFACE AREA 19,000 SF
FILTRATION RATE 1.63 IN/HR = 0.1358 FT/HR
TIME TO INFILTRATE = 90,000 SF / (0.1358 X 19,000) = 34.9 HOURS

AREA SUMMARY

SITE	1,392,411 SF.	
PROPOSED IMPERVIOUS	896,365 SF. (64%)	
BUILDING	123,051 SF. (9%)	
PAVEMENT (PARKING & WALK)	773,314 SF. (56%)	
PERVIOUS	496,046 SF. (36%)	

896,365 SF. X 1.1'/ 12 = 82,200

INFILTRATION SUMMARY

INFILTRATION REQUIREMENT	82,200 CF
AUDI WEST (PARKING)	3,000 CF
AUDI EAST (RECONSTRUCTED)	4,900 CF
STORAGE LOT (FUTURE)	26,900 CF
PORSCHE A (NEW CONSTRUCTION)	940 CF
PORSCHE B (NEW CONSTRUCTION)	7,500 CF
RETROFIT MAIN INFILTRATION	45,000 CF
BALANCE	6,000 CF (EXTRA)

GENERAL NOTES

1. BACKGROUND INFORMATION AND TOPOGRAPHIC SURVEY PROVIDED BY CORNERSTONE LAND SURVEYING INC., STILLWATER, MINNESOTA ON SEPTEMBER 9, 2015, EXPRESSLY FOR THIS PROJECT.
2. FUTURE DEVELOPMENT SHOWN ON THIS DRAWING IS BASED ON APPROVED PUD AND IS SUBJECT TO CHANGE.
3. BALANCE OF INFILTRATION FACILITIES PROPOSED IN APPROVED PLAN DO NOT WORK PROPERLY DUE TO EXISTING SOIL.
4. PERVIOUS PAVEMENT PROPOSED IN ORIGINAL PUD DOES NOT APPEAR TO BE NECESSARY.

Know what's below.
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60 180
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Stephen M. Johnston

NOT FOR CONSTRUCTION

Date: 10/06/2015
Reg No: 18914

Sheet Title
STORM WATER MANAGEMENT

Scale	1" = 60'
Date	10/06/2015
Comm No	BAK15004

Sheet Number
C3.5

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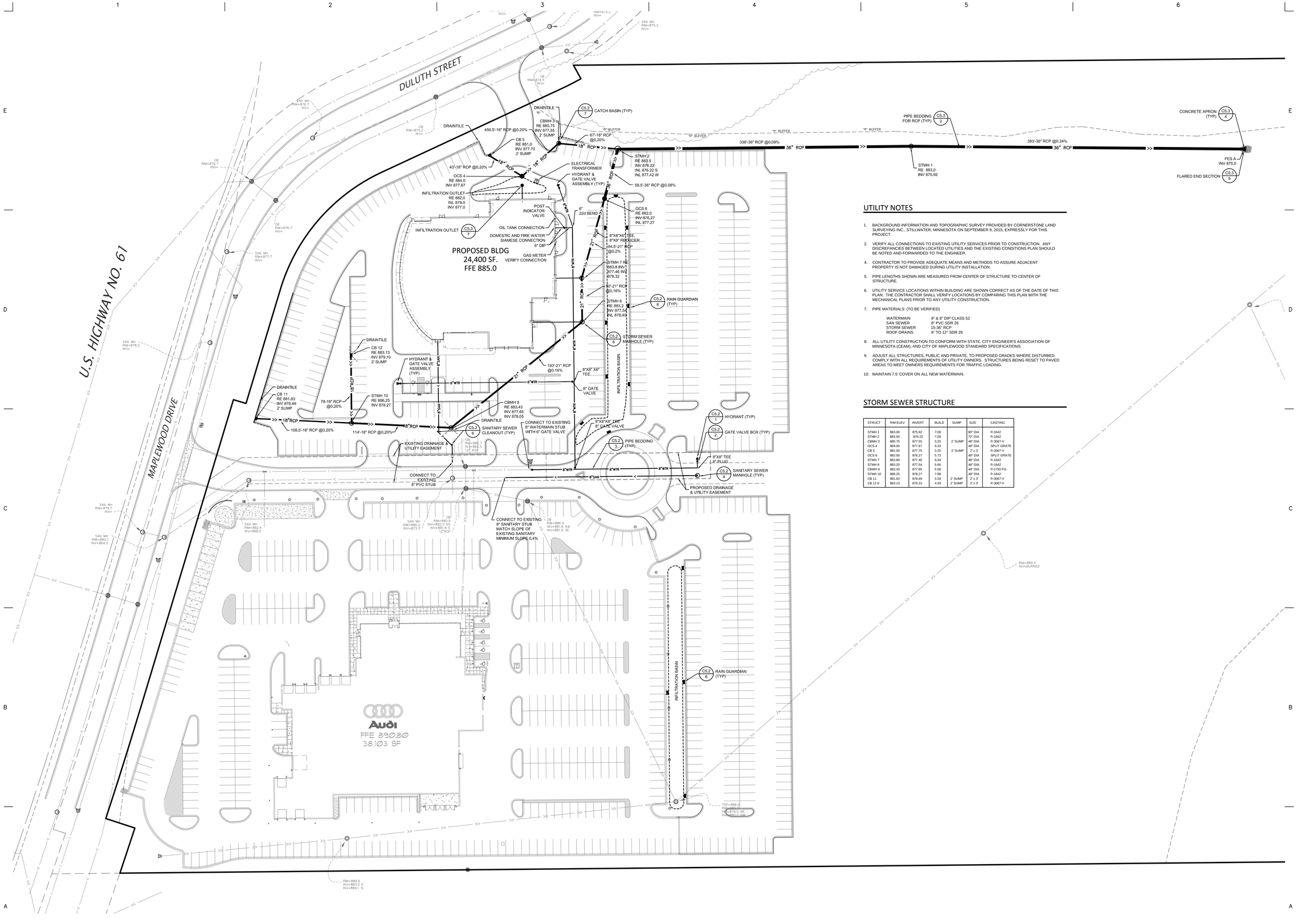

UTILITY NOTES

1. BACKGROUND INFORMATION AND TOPOGRAPHIC SURVEY PROVIDED BY CORNERSTONE LAND SURVEYING INC., STILLWATER, MINNESOTA ON SEPTEMBER 9, 2015, EXPRESSLY FOR THIS PROJECT.
2. VERIFY ALL CONNECTIONS TO EXISTING UTILITY SERVICES PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN LOCATED UTILITIES AND THE EXISTING CONDITIONS PLAN SHOULD BE NOTED AND FORWARDED TO THE ENGINEER.
4. CONTRACTOR TO PROVIDE ADEQUATE MEANS AND METHODS TO ASSURE ADJACENT PROPERTY IS NOT DAMAGED DURING UTILITY INSTALLATION.
5. PIPE LENGTHS SHOWN ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
6. UTILITY SERVICE LOCATIONS WITHIN BUILDING ARE SHOWN CORRECT AS OF THE DATE OF THIS PLAN. THE CONTRACTOR SHALL VERIFY LOCATIONS BY COMPARING THIS PLAN WITH THE MECHANICAL PLANS PRIOR TO ANY UTILITY CONSTRUCTION.
7. PIPE MATERIALS: (TO BE VERIFIED)

WATERMAIN	6" & 8" DIP CLASS 52
SAN SEWER	8" PVC SDR 26
STORM SEWER	15-36" RCP
ROOF DRAINS	6" TO 12" SDR 26

8. ALL UTILITY CONSTRUCTION TO CONFORM WITH STATE, CITY ENGINEER'S ASSOCIATION OF MINNESOTA (CEAM), AND CITY OF MAPLEWOOD STANDARD SPECIFICATIONS.
9. ADJUST ALL STRUCTURES, PUBLIC AND PRIVATE, TO PROPOSED GRADES WHERE DISTURBED. COMPLY WITH ALL REQUIREMENTS OF UTILITY OWNERS. STRUCTURES BEING RESET TO PAVED AREAS TO MEET OWNERS REQUIREMENTS FOR TRAFFIC LOADING.
10. MAINTAIN 7.5' COVER ON ALL NEW WATERMAIN.

STORM SEWER STRUCTURE

STRUCT	RIM ELEV	INVERT	BUILD	SUMP	SIZE	CASTING
STMH 1	883.00	875.92	7.08		60" DIA	R-1642
STMH 2	883.50	876.22	7.28		72" DIA	R-1642
CBMH 3	880.75	877.55	3.20	2' SUMP	48" DIA	R-3067-V
OCS 4	884.00	877.67	6.33		48" DIA	SPLIT GRATE
CB 5	881.00	877.75	3.25	2' SUMP	2' x 3'	R-3067-V
OCS 6	882.00	876.27	5.73		48" DIA	SPLIT GRATE
STMH 7	883.80	877.46	6.34		48" DIA	R-1642
STMH 8	883.20	877.54	5.66		48" DIA	R-1642
CBMH 9	883.43	877.85	5.58		48" DIA	R-1792-FG
STMH 10	886.25	878.27	7.98		48" DIA	R-1642
CB 11	881.83	878.49	3.34	2' SUMP	2' x 3'	R-3067-V
CB 12 8	883.13	879.10	4.03	2' SUMP	2' x 3'	R-3067-V

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Stephen M. Johnson

NOT FOR CONSTRUCTION

Date 10/06/2015 Reg No: 19914

Sheet Title

UTILITY PLAN

Scale	1" = 40'
Date	10/06/2015
Comm No	BAK15004

Sheet Number
C4.1

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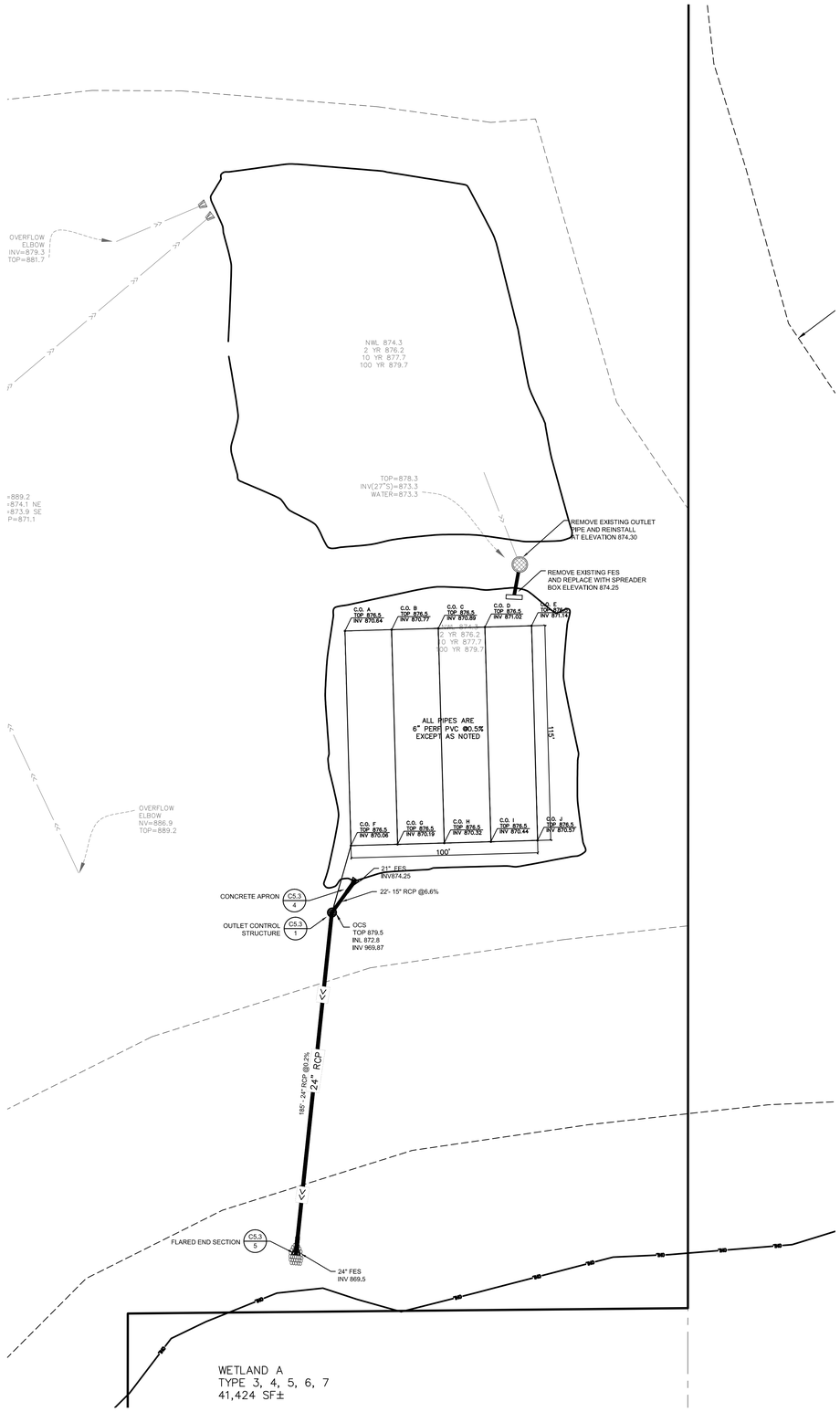

UTILITY NOTES

SEE SHEET C4.1 FOR UTILITY NOTES.

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Stephen M. Johnston

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Date: 10/06/2015
Reg No: 18914

Sheet Title

UTILITY PLAN

Scale	1" = 30'
Date	10/06/2015
Comm No	BAK15004

Sheet Number
C4.2

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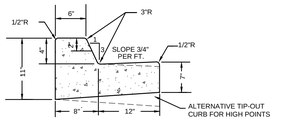
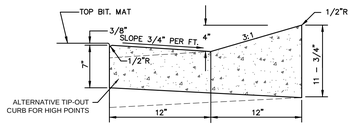
CONTROL JOINTS SHALL CONFORM WITH MNDOT SPEC. 2531.3C. (10' SPACING) CONTROL JOINTS SHALL EXTEND TO BOTH THE FRONT AND BACKS OF THE CURB AND BE 2" DEEP.



1 B412 CONCRETE CURB & GUTTER (MODIFIED B612)
NO SCALE



2 D412 CONCRETE CURB & GUTTER
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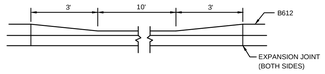
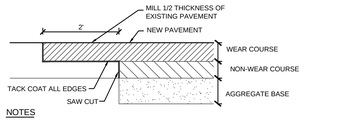


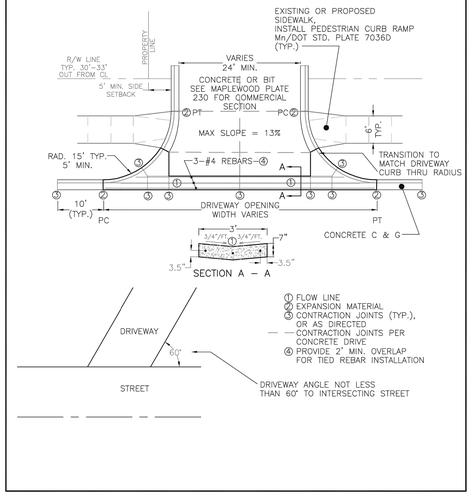
3 DEPRESSED CURB
NO SCALE



NOTES

SAW CUT ALL EDGES. REMOVE BITUMINOUS AND ENOUGH AGGREGATE BASE MATERIAL TO ACCOMMODATE NEW PAVEMENT.

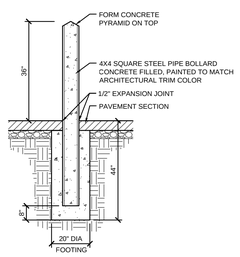
4 BITUMINOUS INTERLOK AT MATCH LINE
NO SCALE



① FLOW LINE
② EXPANSION MATERIAL
③ CONTRACTION JOINTS (TYP.), OR AS DIRECTED
— — CONTRACTION JOINTS PER CONCRETE DRIVE
④ PROVIDE 2' MIN. OVERLAP FOR TIED REBAR INSTALLATION

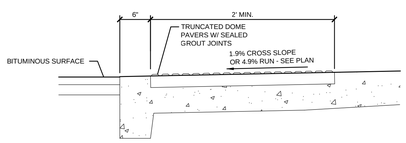
DESIGN: CMC	DATE: 3–02	CITY OF MAPLEWOOD–ENGINEERING DEPT.	PLATE NO.
DRAWN: RKL	FILENAME:P:\WORKS\DAD\PLATES\P230	COMMERCIAL DRIVEWAY	236
REVISIONS			

5 COMMERCIAL DRIVEWAY
NO SCALE

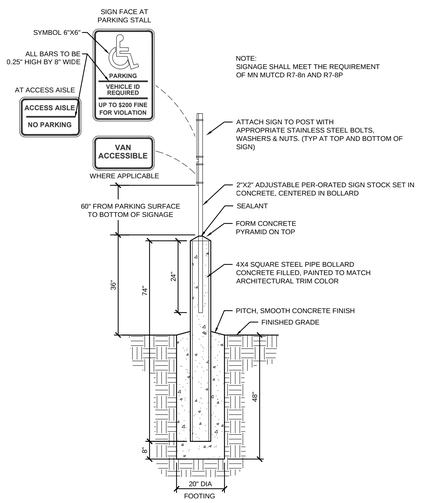


6 4X4 SQUARE BOLLARD
NO SCALE

TRUNCATED DOMES SHALL BE NEENAH FOUNDRY COMPANY. EAST JORDAN IRON WORKS OR APPROVED EQUAL FROM MNDOT'S APPROVED PRODUCTS PAGE. CHARCOAL GREY COATED CAST IRON TRUNCATED DOME PANELS SHALL BE USED FOR ALL PEDESTRIAN RAMPS. USE ONLY ONE SUPPLIER OF PANELS WITHIN THE PROJECT.



7 ACCESSIBILITY CURB RAMP
NO SCALE



8 ACCESSIBILITY SIGNAGE
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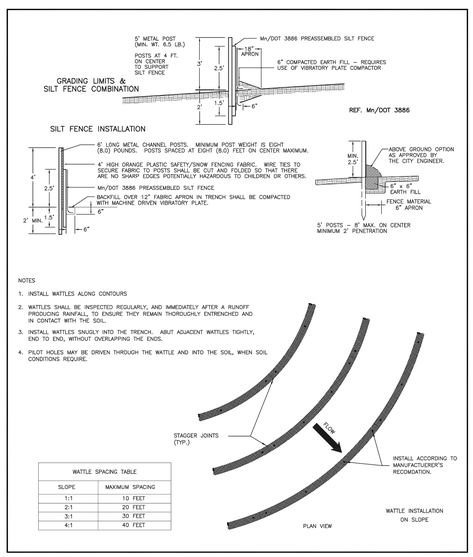

WATTLE SPACING TABLE	
SLOPE	MAXIMUM SPACING
1:1	10 FEET
2:1	20 FEET
3:1	30 FEET
4:1	40 FEET

DESIGN:		CITY OF MAPLEWOOD–ENGINEERING DEPT.	PLATE NO.
DRAWN: JPD		EROSION CONTROL RUNOFF PROTECTION	350C
REVISIONS			3 of 5

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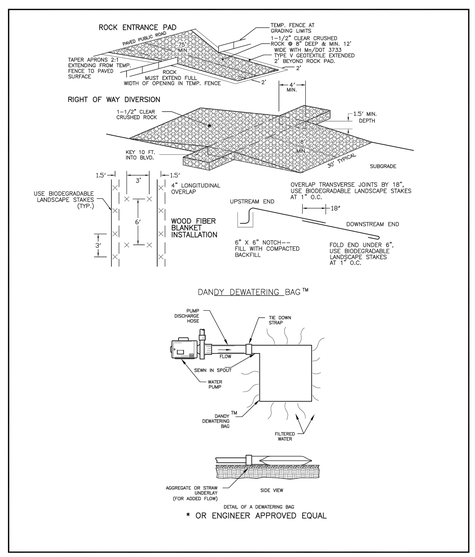
9 SILT FENCE
NO SCALE



* OR ENGINEER APPROVED EQUAL

DESIGN:		CITY OF MAPLEWOOD–ENGINEERING DEPT.	PLATE NO.
DRAWN: JPD		EROSION CONTROL RUNOFF PROTECTION	350B
REVISIONS			2 of 5

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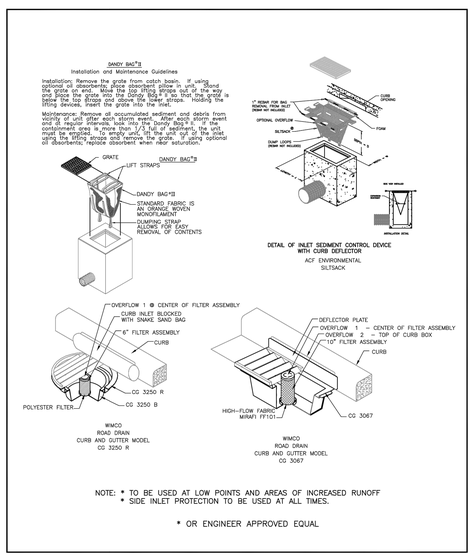
10 ROCK CONSTRUCTION ENTRANCE
NO SCALE



NOTE: * TO BE USED AT LOW POINTS AND AREAS OF INCREASED RUNOFF
* SIDE INLET PROTECTION TO BE USED AT ALL TIMES.

* OR ENGINEER APPROVED EQUAL

DESIGN:		CITY OF MAPLEWOOD–ENGINEERING DEPT.	PLATE NO.
DRAWN: JPD		INLET PROTECTION BELOW GRADE	350D
REVISIONS			4 of 5

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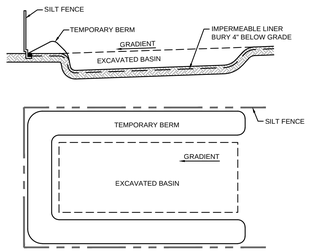
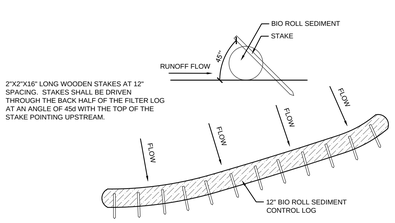
11 INLET PROTECTION
NO SCALE



1. EXCAVATED BASIN SHALL HAVE A MINIMUM 10 YARD CAPACITY.
2. FOLLOWING CONSTRUCTION, OR WHEN 1/2 OF CAPACITY IS LOST, CONTRACTOR SHALL REMOVE ACCUMULATED CONCRETE FROM SITE AND DISPOSE OF AT PROPER FACILITY.
3. PREFABRICATED BASIN MAY BE ACCEPTABLE. SUBMIT SPECIFICATIONS TO ENGINEER FOR APPROVAL.
4. ALTERNATIVE CONCRETE WASHOUT DESIGNS WHICH FUNCTION IN AN EQUAL OR BETTER FASHION ARE ACCEPTABLE.

12 CONCRETE WASHOUT AREA
NO SCALE



13 BIO ROLL SEDIMENT CONTROL
NO SCALE

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Porsche of St. Paul
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MINNEAPOLIS, MN 55401
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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.

Stephen M. Johnson

NOT FOR CONSTRUCTION

Date: 10/06/2015 Reg No: 18914

Sheet Title

DETAILS

Scale	PER SHEET	Sheet Number
Date	10/06/2015	C5.1
Comm No	BAK15004	

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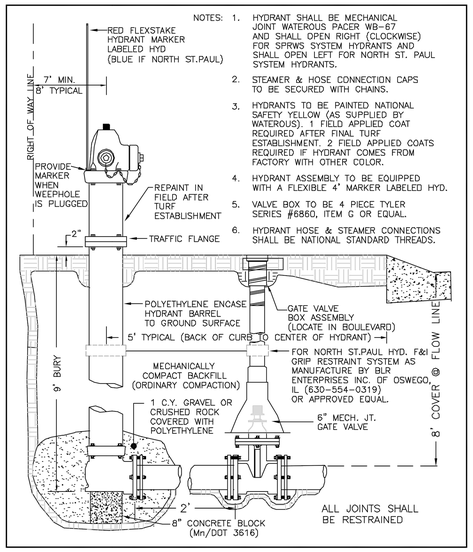
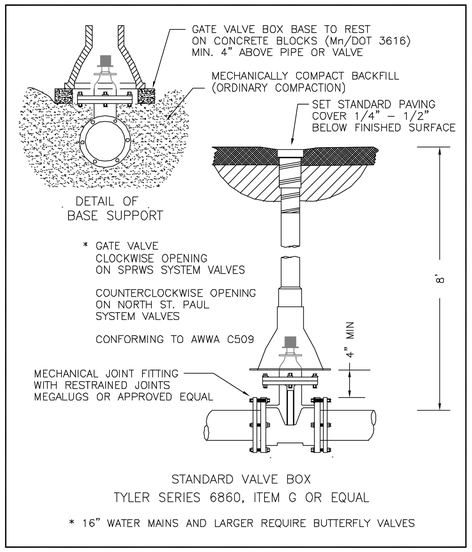
NOTES:
1. HYDRANT SHALL BE MECHANICAL JOINT WATEROUS PACER WB-67 AND SHALL OPEN RIGHT (CLOCKWISE) FOR SPRWS SYSTEM HYDRANTS AND SHALL OPEN LEFT FOR NORTH ST. PAUL SYSTEM HYDRANTS.
2. STEAMER & HOSE CONNECTION CAPS TO BE SECURED WITH CHAINS.
3. HYDRANTS TO BE PAINTED NATIONAL SAFETY YELLOW (AS SUPPLIED BY WATEROUS). 1 FIELD APPLIED COAT REQUIRED AFTER FINAL TURF ESTABLISHMENT. 2 FIELD APPLIED COATS REQUIRED IF HYDRANT COMES FROM FACTORY WITH OTHER COLOR.
4. HYDRANT ASSEMBLY TO BE EQUIPPED WITH A FLEXIBLE 4' MARKER LABELED HYD.
5. VALVE BOX TO BE 4 PIECE TYLER SERIES #6860, ITEM G OR EQUAL.
6. HYDRANT HOSE & STEAMER CONNECTIONS SHALL BE NATIONAL STANDARD THREADS.



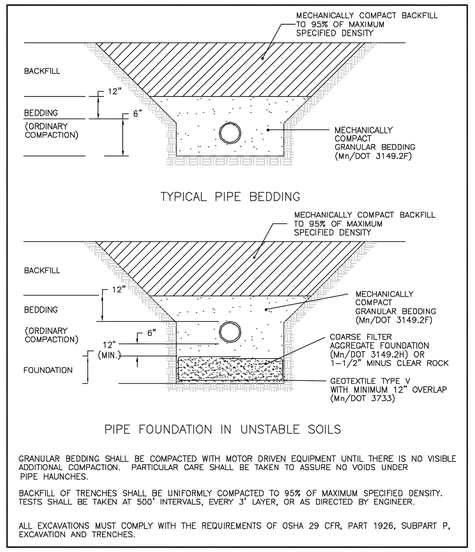
DESIGN: CMC	DATE: 3-95	CITY OF MAPLEWOOD-ENGINEERING DEPT.	PLATE NO.
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\P500	HYDRANT INSTALLATION (REFERENCE SPRWS STANDARD PLATE D-3)	500
REVISIONS	3-97 3-02		

1 HYDRANT NO SCALE



DESIGN: CMC	DATE: 3-95	CITY OF MAPLEWOOD-ENGINEERING DEPT.	PLATE NO.
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\P502	GATE VALVE BOX & INSTALLATION (REFERENCE SPRWS STANDARD PLATE D-2)	502
REVISIONS	3-97 3-02		

2 GATE VALVE BOX NO SCALE



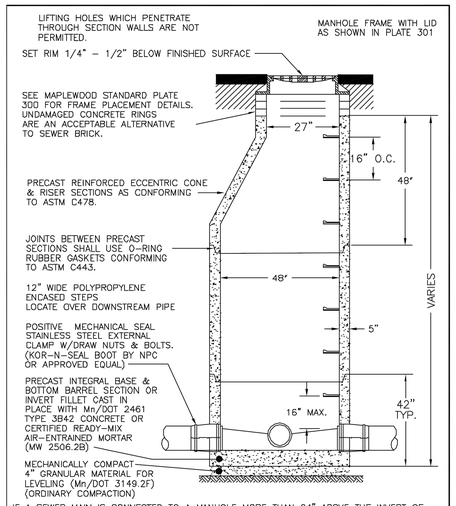
GRANULAR BEDDING SHALL BE COMPACTED WITH MOTOR DRIVEN EQUIPMENT UNTIL THERE IS NO VISIBLE ADDITIONAL COMPACTION. PARTICULAR CARE SHALL BE TAKEN TO ASSURE NO VOIDS UNDER PIPE HAUNCHES.

BACKFILL OF TRENCHES SHALL BE UNIFORMLY COMPACTED TO 95% OF MAXIMUM SPECIFIED DENSITY. TESTS SHALL BE TAKEN AT 500' INTERVALS, EVERY 3' LAYER, OR AS DIRECTED BY ENGINEER.

ALL EXCAVATIONS MUST COMPLY WITH THE REQUIREMENTS OF OSHA 29 CFR, PART 1926, SUBPART P, EXCAVATION AND TRENCHES.

DESIGN: CMC	DATE: 3-95	CITY OF MAPLEWOOD-ENGINEERING DEPT.	PLATE NO.
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\P440	EMBEDMENT DETAILS FOR P.V.C. OR H.D.P.E. PIPE	440
REVISIONS	3-97 3-02		

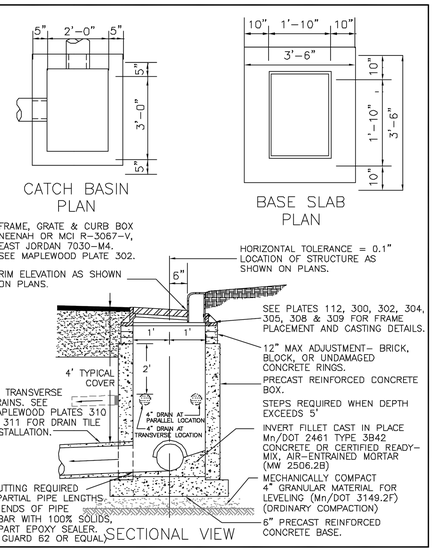
3 PIPE BEDDING NO SCALE



IF A SEWER MAIN IS CONNECTED TO A MANHOLE MORE THAN 24" ABOVE THE INVERT OF THE OUTGOING SEWER, CONNECTION SHALL BE BY MEANS OF AN OUTSIDE DROP SEE PLATE 401. INVERTS FOR INSIDE DROP CONNECTIONS WHICH ARE LESS THEN 24" SHALL BE FORMED BY USING A LATERAL CUT SECTION OF PVC MAIN PIPE, OR A BEND.

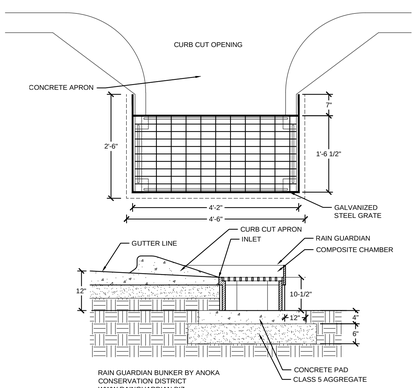
DESIGN: CMC	DATE: 10/5/84	CITY OF MAPLEWOOD-ENGINEERING DEPT.	PLATE NO.
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\P400	SANITARY SEWER MANHOLE	400
REVISIONS	10-94 3-97 3-02		

4 SANITARY SEWER MANHOLE NO SCALE

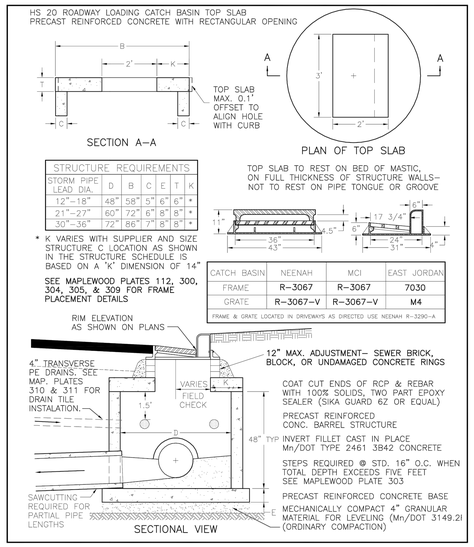


DESIGN: CMC	DATE: 3-95	CITY OF MAPLEWOOD-ENGINEERING DEPT.	PLATE NO.
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\P306	2' x 3' BOX CATCH BASIN	306
REVISIONS	3/02		

5 2'X3' BOX CATCH BASIN NO SCALE



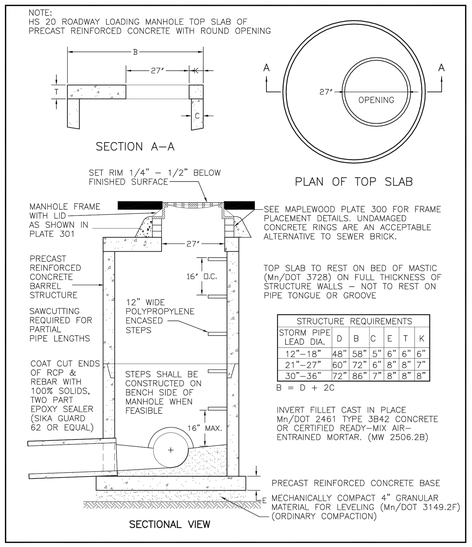
6 "BUNKER" RAIN GUARDIAN NO SCALE



DESIGN: CMC	DATE: 3-95	CITY OF MAPLEWOOD-ENGINEERING DEPT.	PLATE NO.
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\P302	STANDARD CATCH BASIN	302
REVISIONS	3-97 3-02 3-04 3-06 3-07		

P:\WORKS\CAD\PLATES\dwg\P302.DWG 4/11/2007 4:31:22 PM CDT

7 CATCH BASIN NO SCALE



DESIGN: CMC	DATE: 3-95	CITY OF MAPLEWOOD-ENGINEERING DEPT.	PLATE NO.
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\P303	STORM SEWER MANHOLE	303
REVISIONS	3-97 3-02 3-04 3-06		

P:\WORKS\CAD\PLATES\dwg\P303.DWG 4/18/2006 10:26:02 AM CDT

8 STORM SEWER MANHOLE NO SCALE

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Stephen M. Johnson

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Date: 10/06/2015 Reg No: 18914

Sheet Title

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Scale	PER SHEET	Sheet Number
Date	10/06/2015	C5.2
Comm No	BAKS004	

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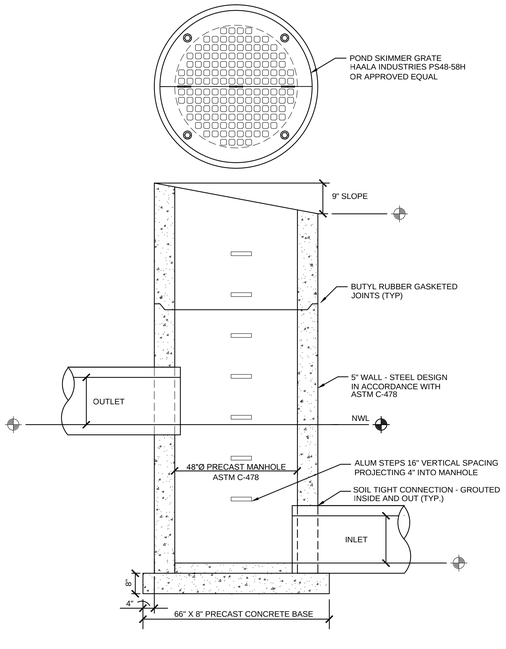
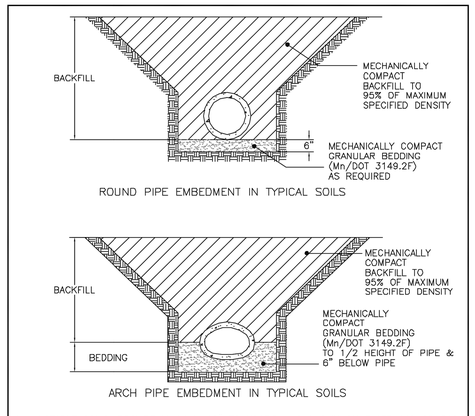


1 OUTLET CONTROL STRUCTURE

NO SCALE



IN UNSTABLE SOILS, PROVIDE MINIMUM 12" FOUNDATION AS SHOWN ON PLATE 440 OR 540.

GRANULAR BEDDING SHALL BE COMPACTED WITH MOTOR DRIVEN EQUIPMENT UNTIL THERE IS NO VISIBLE ADDITIONAL COMPACTION. PARTICULAR CARE SHALL BE TAKEN TO ASSURE NO VOIDS UNDER PIPE HAUNCHES.

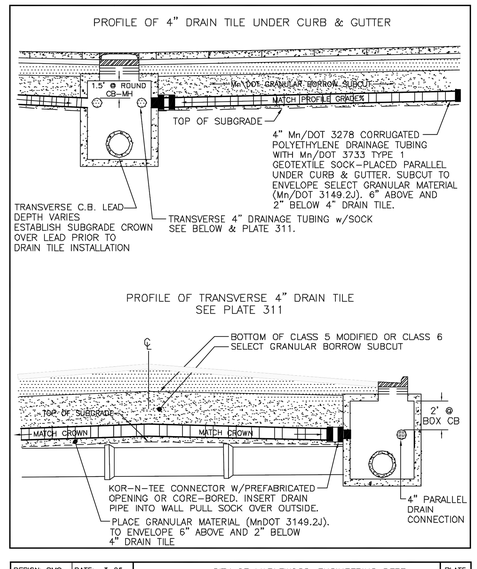
ALL BACKFILL AND BEDDING OF TRENCHES SHALL BE UNIFORMLY COMPACTED, TO 95% OF MAXIMUM SPECIFIED DENSITY. TESTS SHALL BE TAKEN AT 500' INTERVALS, EVERY 3' LAYER OR AS DIRECTED BY THE ENGINEER.

ALL EXCAVATIONS MUST COMPLY WITH THE REQUIREMENTS OF OSHA 29 CFR, PART 1926, SUBPART P, "EXCAVATION AND TRENCHES."

DESIGN: RAM	DATE: 3-95	CITY OF MAPLEWOOD-ENGINEERING DEPT. EMBEDMENT DETAILS FOR REINFORCED CONCRETE PIPE	PLATE NO. 340
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\P340		
REVISIONS 3-97 3-02			

2 PIPE BEDDING FOR RCP

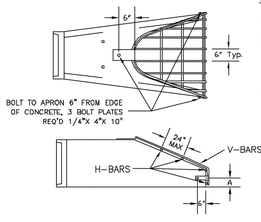
NO SCALE



DESIGN: CMC	DATE: 3-95	CITY OF MAPLEWOOD-ENGINEERING DEPT. DRAIN TILE INSTALLATION PROFILE	PLATE NO. 310
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\P310		
REVISIONS 3/02			

3 DRAIN TILE

NO SCALE



NOTES

1. BARS & PLATES ARE HOT-ROLLED STEEL.
2. BARS, PLATES, & PIPE ARE FINISHED WITH 2 COATS OF ALUMINUM PAINT.
3. BOLTS ARE GALVANIZED.
4. SEE Mn/DOT PLATES 3100 & 3110 FOR APRON DIMENSIONS.
5. WRAP LAST 2 SECTIONS W/TYPE V GEOTEXTILE NON WOVEN FILTER FABRIC.
6. CUT OFF BOTTOM BARS ON ALL OUTLET APRONS.
7. REFER TO PLAN QUANITY AND MNDOT PLATES FOR RIP RAP DETAIL.

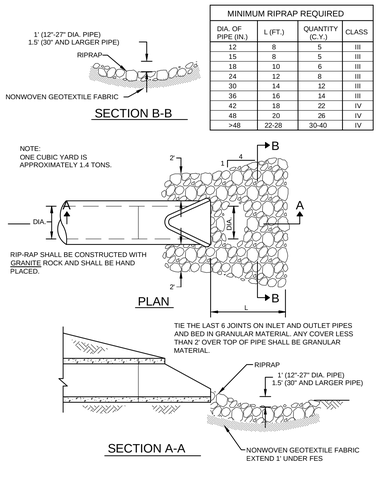
	APRON SIZE	V-BAR SIZE	H-BAR SIZE	NO. OF H-BARS REQ'D	BOLT DIA.	"A" DIM.
	INCHES				INCHES	
ROUND PIPE APRONS	12	1/2ø	5/8ø	3	1/2	4
	15	1/2ø	5/8ø	3	1/2	4 1/2
	18	1/2ø	5/8ø	4	1/2	4 1/2
	21	1/2ø	5/8ø	4	1/2	5
	24	5/8ø	3/4ø	4	1/2	5
	27	5/8ø	3/4ø	4	1/2	5 1/2
	30	5/8ø	3/4ø	4	1/2	5 1/2
	36	3/4ø	1ø	4	3/4	8
	42	3/4ø	1ø	4	3/4	8
	48	3/4ø	1ø	5	3/4	8
	54	3/4ø	1 1/2 PIPE	5	3/4	8
	60	3/4ø	1 1/2 PIPE	5	3/4	8
	66	3/4ø	1 1/2 PIPE	6	3/4	8
	72	3/4ø	1 1/2 PIPE	6	3/4	9
	84	3/4ø	1 1/2 PIPE	7	3/4	10
	90	3/4ø	1 1/2 PIPE	7	3/4	14

	APRON SIZE	V-BAR SIZE	H-BAR SIZE	NO. OF H-BARS REQ'D	BOLT DIA.	"A" DIM.
	INCHES				INCHES	
ARCH PIPE APRONS	18	1/2ø	5/8ø	3	1/2	5
	24	5/8ø	3/4ø	4	1/2	7
	30	5/8ø	3/4ø	4	1/2	7 1/2
	36	3/4ø	1ø	4	1/2	10 1/2
	42	3/4ø	1ø	4	3/4	11
	48	3/4ø	1 1/2 PIPE	4	3/4	12
	54	3/4ø	1 1/2 PIPE	4	3/4	12
	60	3/4ø	1 1/2 PIPE	5	3/4	14
	72	3/4ø	1 1/2 PIPE	5	3/4	14
	84	3/4ø	1 1/2 PIPE	6	3/4	15

DESIGN: CMC	DATE: 3-95	CITY OF MAPLEWOOD-ENGINEERING DEPT. TRASH GUARDS FOR CONCRETE APRONS	PLATE NO. 330
DRAWN: JPD	FILENAME:P:\WORKS\CAD\PLATES\P330		
REVISIONS 3-02			

4 CONCRETE APRONS

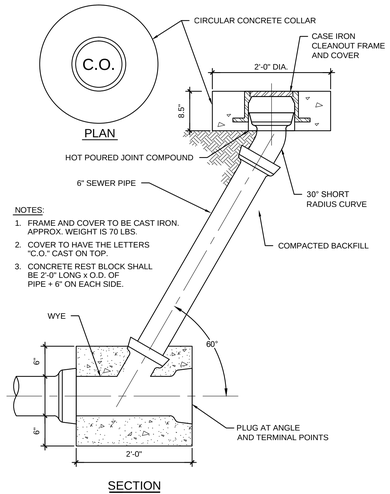
NO SCALE



MINIMUM RIPRAP REQUIRED			
DIA. OF PIPE (IN.)	L (FT.)	QUANTITY (C.Y.)	CLASS
12	8	5	III
15	8	5	III
18	10	6	III
24	12	8	III
30	14	12	III
36	16	14	III
42	18	22	IV
48	20	26	IV
>48	22-28	30-40	IV

5 FLARED END SECTIONS

NO SCALE

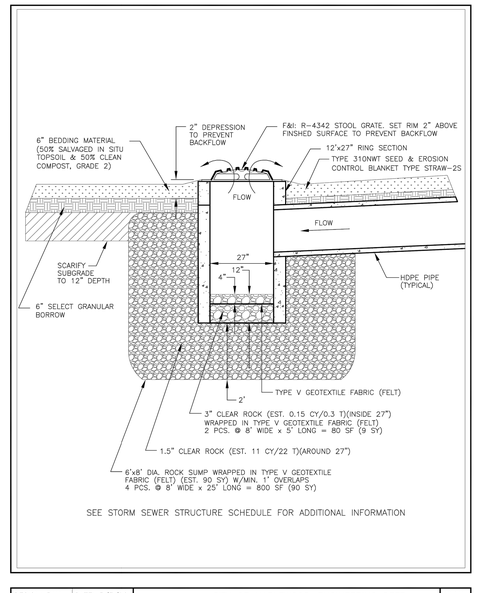


NOTES:

1. FRAME AND COVER TO BE CAST IRON. APPROX. WEIGHT IS 70 LBS.
2. COVER TO HAVE THE LETTERS "C.O." CAST ON TOP.
3. CONCRETE REST BLOCK SHALL BE 2'-0" LONG x O.D. OF PIPE + 6" ON EACH SIDE.

6 SANITARY SEWER CLEANOUT

NO SCALE



DESIGN: RAM	DATE: 5/3/96	CITY OF MAPLEWOOD-ENGINEERING DEPT. INFILTRATION OUTLET DETAIL	PLATE NO. 313
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\P313		
REVISIONS 3-04			

7 INFILTRATION OUTLET

NO SCALE

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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.

Stephen M. Johnson

NOT FOR CONSTRUCTION

Date: 10/06/2015 Reg No: 19914

Sheet Title

DETAILS

Scale	PER SHEET	Sheet Number
Date	10/06/2015	C5.3
Comm No	BAK5004	

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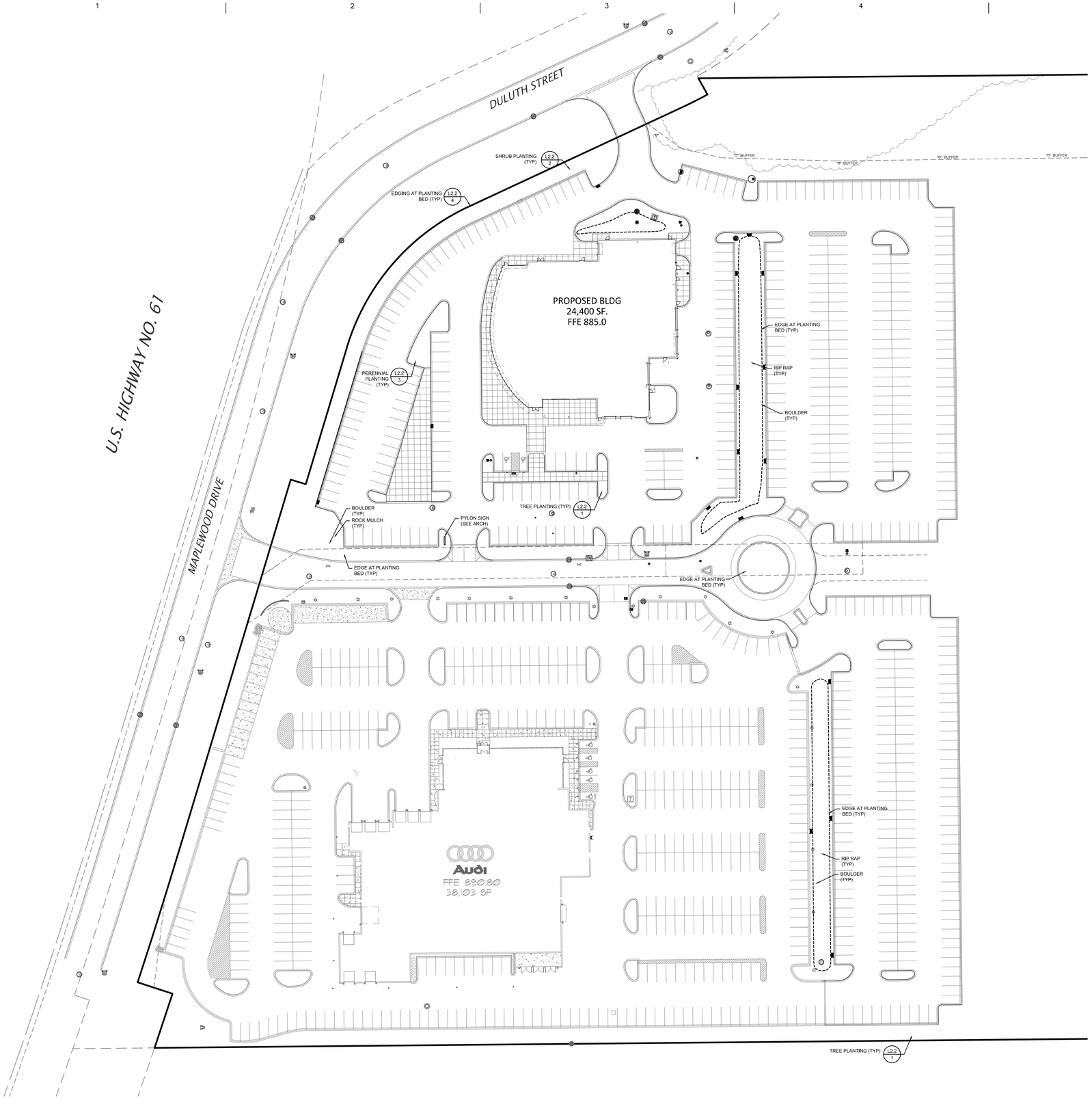

LANDSCAPE NOTES

1. BACKGROUND INFORMATION AND TOPOGRAPHIC SURVEY PROVIDED BY CORNERSTONE LAND SURVEYING INC., STILLWATER, MINNESOTA ON SEPTEMBER 9, 2015, EXPRESSLY FOR THIS PROJECT.
2. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FINISHED GRADING AND POSITIVE SURFACE DRAINAGE IN ALL LANDSCAPE AREAS. LANDSCAPE CONTRACTOR MUST ENSURE THAT THE FINAL GRADES ARE MET AS SHOWN ON GRADING PLAN. IF ANY DISCREPANCIES ARE FOUND, IMMEDIATELY NOTIFY LANDSCAPE ARCHITECT FOR RESOLUTION.
3. ALL PLANT MATERIALS ARE TO CONFORM WITH STATE & LOCAL CONSTRUCTION STANDARDS AND THE CURRENT ADDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS. ALL PLANT MATERIALS ARE TO BE HEALTHY, HARDY STOCK, AND FREE FROM ANY DISEASES, DAMAGE, AND DISFIGURATION.
4. QUANTITIES OF PLANTS LISTED ON THE PLAN ARE TO GOVERN ANY DISCREPANCY BETWEEN THE QUANTITIES SHOWN ON THE PLANT SCHEDULE AND PLAN. PLACE PLANTS IN PROPER SPACING FOLLOWING LAYOUT FIGURES.
5. EDGE ALL SHRUB BEDS WITH SIX (6) INCH BLACK VINYL EDGING (BLACK DIAMOND OR APPROVED EQUAL).
6. MAINTAIN THIRTY (30) INCHES CLEARANCE AROUND PARKING STALLS TO ALLOW OVERHANG OF PARKED CARS.
7. APPLY FOUR (4) INCH DEPTH OF SHREDDED HARDWOOD BARK MULCH, COLORED BLACK, IN FOUR (4) FOOT DIAMETER RING AROUND ALL TREES IN TURF AREA. NO ALUMINUM EDGING IS REQUIRED.
8. APPLY FOUR (3) INCH DEPTH OF ONE (1) - FOUR (4) INCH DARK GRAY TRAP ROCK MULCH OVER WEED BARRIER FABRIC.
9. PLACE AND BURY 16"-36" GRAY TRAP BOULDERS AS SHOWN ON PLAN TO A DEPTH OF APPROXIMATELY 1/3 OF OVERALL SIZE.
10. WEED BARRIER FABRIC TO BE BLACK POLYPROPYLENE SHEET 27 MILS THICK, 4 OZ/SQ.YD, TENSILE STRENGTH PER ASTM D-4632. PRODUCT BY DEWITT COMPANY OR APPROVED EQUAL.
11. APPLY PRE-EMERGENT TO MULCH IN PLANTING AREAS TO PROHIBIT WEED GROWTH. APPLICATION RATE TO BE PER MANUFACTURER'S RECOMMENDATIONS. IF WEEDS APPEAR IN TREATED AREAS DURING THE FIRST YEAR, LANDSCAPE CONTRACTOR TO REMOVE ALL WEEDS AT NO ADDITIONAL COST.
12. SOD SHALL CONFORM WITH MNDOT 3878.2A, BE DENSE, AND OF UNIFORM TEXTURE, FREE OF WEEDS AND DISEASE. APPLY MINIMUM SIX (6) INCHES OF TOPSOIL (MNDOT 3877) AND THOROUGHLY APPLY SLOW RELEASE FERTILIZER TO TOP TWO (2) INCHES BEFORE LAYING SOD.
13. PLANTING SOIL FOR LANDSCAPED AREAS SHALL BE MINIMUM SIX (6) INCHES IN DEPTH. PLANTING SOIL SHALL BE WELL-GRADED SOIL, FRIABLE AND FERTILE, FREE OF HARDPACK SUBSOIL, STONES AND NOXIOUS WEEDS, AND HAVE A PH BETWEEN 6.5 AND 7.5. PLANTING SOIL TO BE A MIXTURE OF SELECTED TOPSOIL BORROW (MNDOT 3877 TYPE B), PEAT MOSS OR COMPOSTED YARD WASTE AND FERTILIZER. MIXING PROPORTIONS SHALL BE ACCORDING TO LOOSE VOLUME RATIO AND HAVE A COMPOSITE ORGANIC CONTENT AT NO LESS THAN 15% AND NO GREATER THAN 20%. FERTILIZER SHALL BE SLOW RELEASE COMMERCIAL FERTILIZER AND ADDED IN SUFFICIENT QUANTITY TO PROVIDE 0.05 POUND OF TOTAL NITROGEN PER CUBIC YARD OF PLANTING SOIL.
14. FOLLOW LANDSCAPE DETAILS FOR ALL INSTALLATION, UNLESS OTHERWISE NOTED.
15. PLANTING AND TURF AREAS SHALL BE IRRIGATED WITH AN UNDERGROUND IRRIGATION SYSTEM. NO WATER IS ALLOWED ON ANY PAVEMENT, PARKING, WALKWAY, AND BUILDING. THE IRRIGATION CONTRACTOR IS TO DESIGN AND ENSURE THAT IRRIGATION DESIGN MEETS ALL CITY PLUMBING CODES AND REQUIREMENTS.
16. LANDSCAPE CONTRACTOR TO MAINTAIN PLANTS AND SOD IN HEALTHY CONDITION THROUGHOUT ONE YEAR WARRANTY PERIOD. THE WARRANTY PERIOD SHALL BE BEGIN UPON INSPECTION AND ACCEPTANCE BY CITY STAFF.

PLANT SCHEDULE

KEY	QUANT.	COMMON NAME	SCIENTIFIC NAME	SIZE	ROOT COND.	MATURE SIZE
DECIDUOUS TREES						
	12	FIRST ADDITIONS MATADOR MAPLE	ACER X FREEMANII 'BAILSTON'	2.5" CAL.	B&B	40'H X 30'W
	13	PAPER BIRCH	BETULA PLATYPHYLLA	10' CLUMP	B&B	50'H X 35'W
	8	RED SUNSET MAPLE	ACER RUBRUM 'FRANKSRED'	10' CLUMP	B&B	50'H X 30'W
	11	FESTIGIATA OAK	QUERCUS ROBUR 'FESTIGIATA'	2.5" CAL.	B&B	50'H X 15'W
CONIFEROUS TREES						
	7	BLACK HILLS SPRUCE	PICEA GLAUCA DENSATA	6' HT.	B&B	35'H X 20'W
ORNAMENTAL TREES						
	10	AUTUMN BRILLIANCE SERVICEBERRY	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE	2.0" CAL.	B&B	25'H X 15'W
DECIDUOUS SHRUBS						
	36	AUTUMN MAGIC BLACK CHOKEBERRY	ARONIA MELANOCARPA 'AUTUMN MAGIC'	5 GAL	POT	4'H X 4'W
	43	ARCTIC FIRE DOGWOOD	CORNUS STOLONIFERA 'FARROW'	5 GAL	POT	3'H X 4'W
	160	GRO-LOW FRAGRANT SUMAC	RHUS AROMATICAL 'GRO-LOW'	5 GAL	POT	2'H X 4'W
CONIFEROUS SHRUBS						
	116	BLUE CHIP JUNIPER	JUNIPERUS HORIZONTALIS 'BLUE CHIP'	5 GA	POT	10"H X 4'W
PERENNIALS						
	175	KARL FOERSTER FEATHER REED GRASS	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	2 GAL	POT	2'H X 2'W
	179	RUBY STELLA DAYLILY	HEMEROCALLIS 'RUBY STELLA'	1 GAL	POT	1.5'H X 1.5'W
	108	SHENANDOAH SWITCH GRASS	PANICUM VIRGATUM 'SHENANDOAH'	1 GAL	POT	3.5'H X 2.5'W
	150	BLACKED EYED SUSAN	RUDBEKIA FULGIDA 'GOLDSTURM'	1 GAL	POT	2'H X 2'W

SUBSTITUTIONS: IF ANY SUBSTITUTIONS ARE REQUIRED, SUBMIT WRITTEN DOCUMENTS AND PROPOSED SUBSTITUTIONS TO LANDSCAPE ARCHITECT FOR APPROVAL 5 DAYS PRIOR TO PURCHASE AND/OR INSTALLATION.

LEGEND

SOD

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Fax: 612.339.5668

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Maplewood, MN 55109

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I hereby certify that this plan was prepared by me, or under my direct supervision, and that I am a duly Licensed Landscape Architect under the laws of the state of MINNESOTA.

Pitarsinee Saradhuy

NOT FOR CONSTRUCTION

Date: 10/06/2015
Reg No: 45099

Sheet Title

LANDSCAPE PLAN

Scale	1" = 40'
Date	10/06/2015
Comm No	BAK15004

Sheet Number
L2.1

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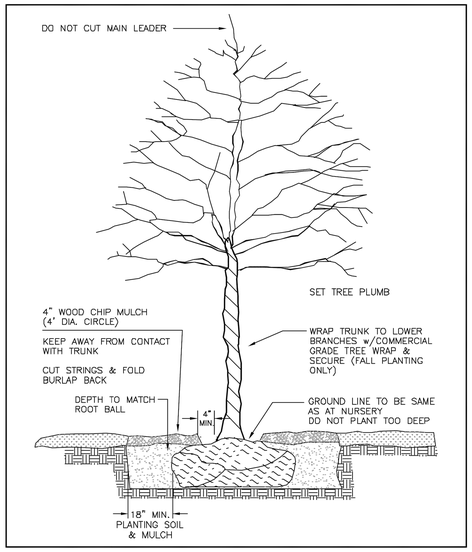

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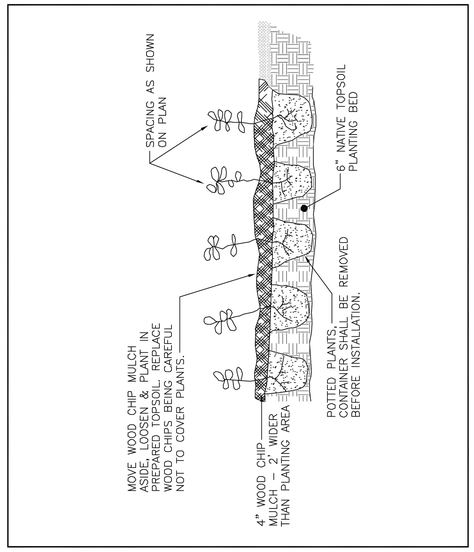
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\PB50	TREE PLANTING DETAIL	650
REVISIONS 3-97 3-01			

1 TREE PLANTING
NO SCALE



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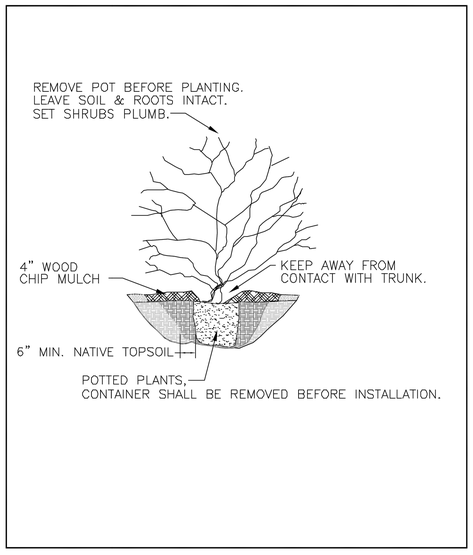
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\PB52	GROUND COVER PLANTING DETAIL	652
REVISIONS			

3 PERENNIAL PLANTING
NO SCALE



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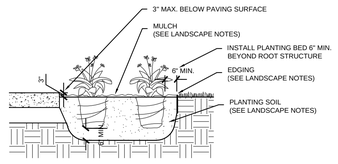
DRAWN: RKL	FILENAME:P:\WORKS\CAD\PLATES\PB51	SHRUB PLANTING DETAIL	651
REVISIONS			

2 SHRUB PLANTING
NO SCALE



4 EDGING AT PLANTING BED
NO SCALE

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Pilarsinee Sarathorn

NOT FOR CONSTRUCTION

Date: 10/06/2015 Reg No: 45059

Sheet Title

LANDSCAPE DETAILS

Scale	PER SHEET
Date	10/06/2015
Comm No	BAK15004

Sheet Number L2.2

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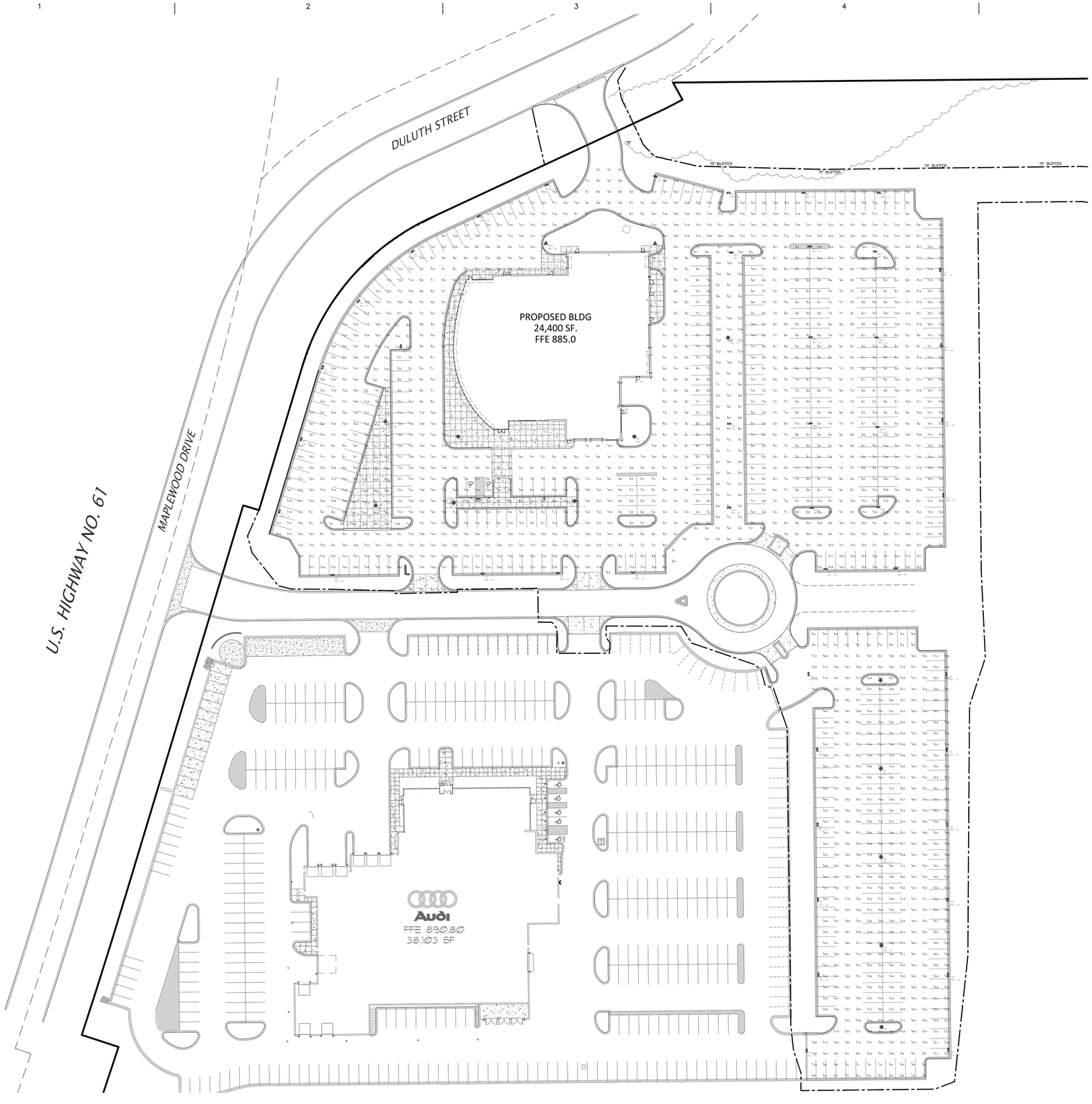

1 PHOTOMETRIC CALCULATION

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description	BUG Rating
	34	AA	TWIN	N.A.	0.880	Lecotek #ART8-30M-MV-NW-4-BK-700-HSS Twin at 28ft MH BK Alu Pole	B3-U0-G3
	11	BB	4 @ 90 DEGREES	N.A.	0.880	Lecotek #ART8-30M-MV-NW-5-BK-700 Quad at 28ft MH BK Alu Pole	B4-U0-G2
	12	BB-1	BACK-BACK	N.A.	0.880	Lecotek #ART8-30M-MV-NW-5-BK-700 Twin at 28ft MH BK Alu Pole	B4-U0-G2
	3	BB-2	3 @ 120 DEGREES	N.A.	0.880	Lecotek #ART8-30M-MV-NW-5-BK-700 Triple at 28ft MH BK Alu Pole	B4-U0-G2

Calculations by:
Charlie Leavitt, LC, MIES
Lighting Fundamentals, LLC
PO Box 50827
Mendota, MN 55150-0877

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Lower Lot_Planar	Illuminance	Fc	13.63	19.5	5.3	2.57	3.68
Upper Site_Planar	Illuminance	Fc	10.00	18.6	3.5	2.86	5.31

LPD Area Summary

Label	Area	Total Watts	LPD
Lower Lot	48139	9693.199	0.201
Upper Lot	189984	24367.35	0.128

Dimming and Time Of Day Controls by Electrical Contractor

ASHRAE 90.1 Power Allowance for Vehicle Sales - Lighting Zone 3 = .5 Watts/Square Foot

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NOT FOR CONSTRUCTION

Date: 10/06/2015
Reg No:

Sheet Title
LIGHTING PLAN

Scale 1" = 40'
Date 10/06/2015
Comm No. BAKI5004
Sheet Number E1.1

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Exterior Finish Key

Aluminum Doors & frames: Black anodized unless noted otherwise

Alum composite panels: Dry System, Colors as follows:
ACM-1: Alpolic-B9X Silver
ACM-2: Alpolic-Perforated B9X Silver
Contact: Alpolic by Pattison Signs
Beth Spaman- (866) 218-1916 x 4181

Corrugated Metal Wall Panels:
MP-1: Trapezium Metal Panel Mfr: Centria
Color: 9916 Rich Black, Smooth Texture Rigid Wall
Contact: Matt Breyer (952) 215-6288

Glass Types: Provide tempered glass where req'd
GL-1: 1" insulated units with low 'E' on #2 surface & clear glass
GL-2: 1" insulated units with black frit on #4 surface & clear glass

Insulated Precast Panels: Exposed exterior surfaces painted SW6990 'Caviar'

OH & High Speed OH Doors: Powder coat to match RAL 7021

General Exterior Finish Notes

1. Add miscellaneous framing / blocking as req'd to support item on mtl wall panel.

2. Maximum mtl wall panel length is 20'. Allow for expansion per manufacturer's requirements.

3. Provide samples of materials for approval.

4. Provide draudouns of paint for approval.

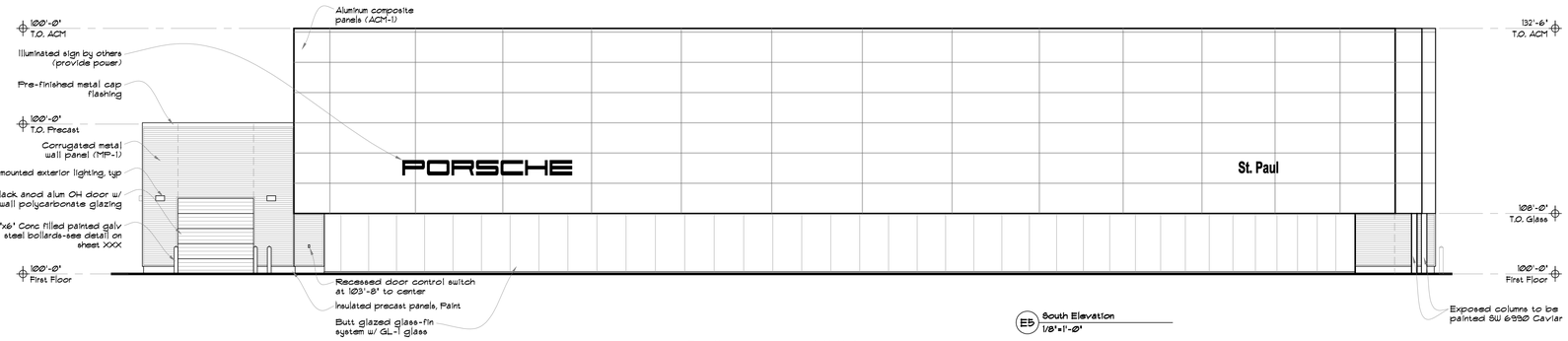
5. 1" insulated glazing shall have color matching glazing spacers.

6. Pre-finished mtl coping, downspouts, & scuppers: pre-finished galv mtl to be Centria Rich Black #9916.

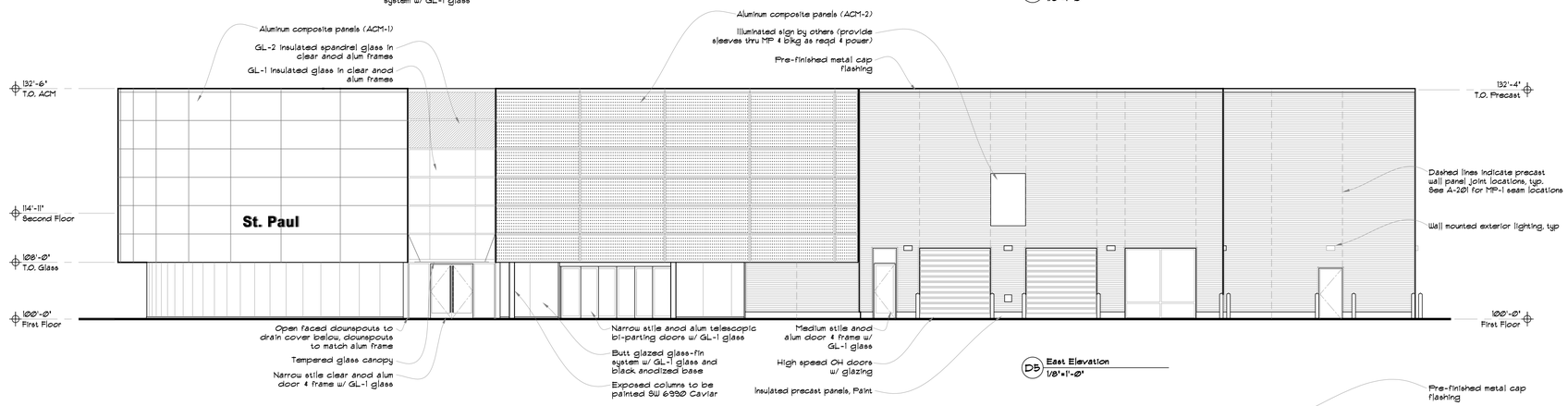
7. All exterior window frames, HM doors, HM, frames, fiberglass doors, and exposed mtl to be painted to match SW 6990 Caviar.

8. All exterior bollards to be painted Acrylon 100, Flat: Color SW 6990 Caviar.

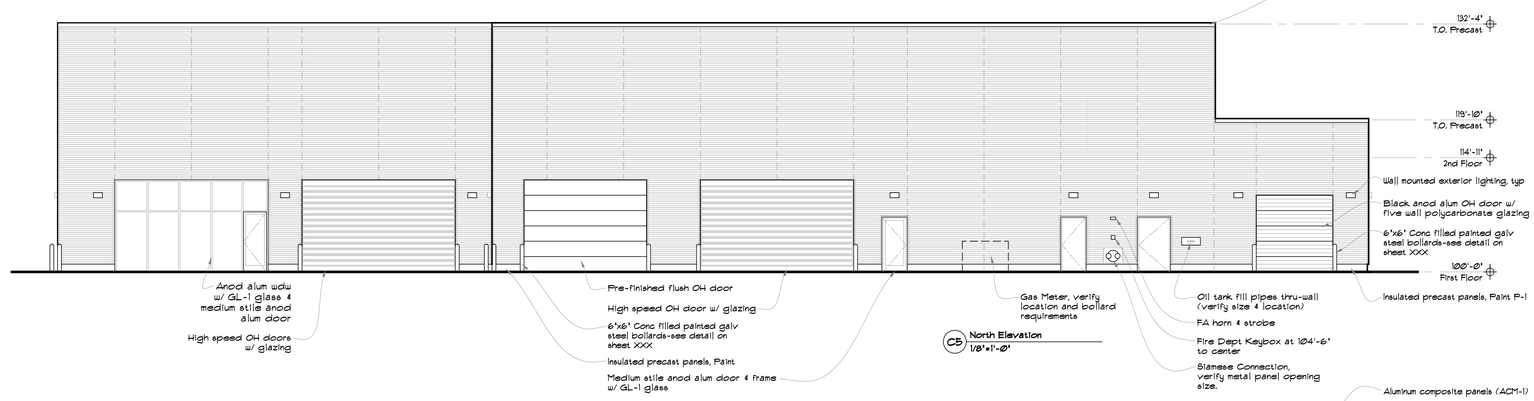
9. All exterior columns to be painted SW 6990 Caviar.



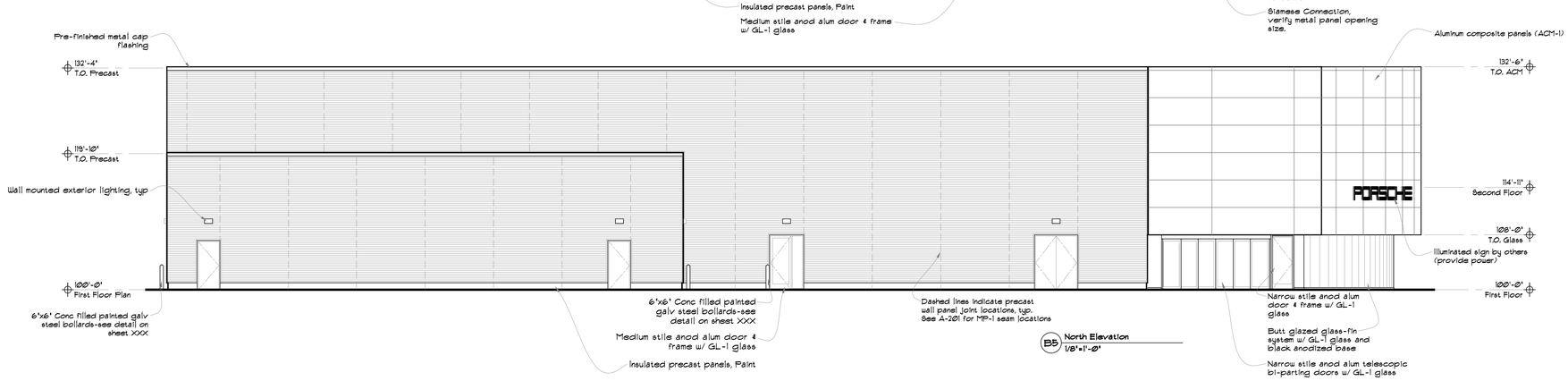
E5 South Elevation
1/8"=1'-0"



D5 East Elevation
1/8"=1'-0"



C5 North Elevation
1/8"=1'-0"



B5 North Elevation
1/8"=1'-0"

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Issued:
CDRBA Submittal 06 Oct 2015

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 ARCHITECT under the laws of the state of MINNESOTA

Nguyen T. Hoang

Date: xx/xx/xxxx
Reg No: 50034

Sheet Title

Exterior Elevations

Scale 1/8"=1'-0"
Date 10/06/2015
Comm No 2552

Sheet Number
A-201

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Exterior Finish Key

Aluminum Doors & frames: Black anodized unless noted otherwise

Alum composite panels: Dry System, Colors as follows:
ACM-1: Alpolic-B6X Silver
ACM-2: Alpolic-Perforated B6X Silver
Contact: Alpolic by Pattison Signs
Beth Spaman- (866) 218-1976 x 418!

Corrugated Metal Wall Panels:
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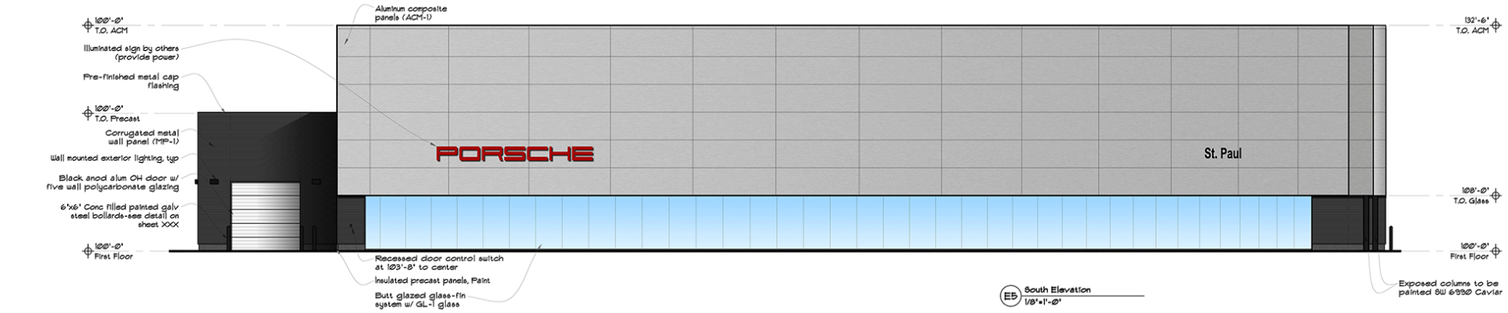
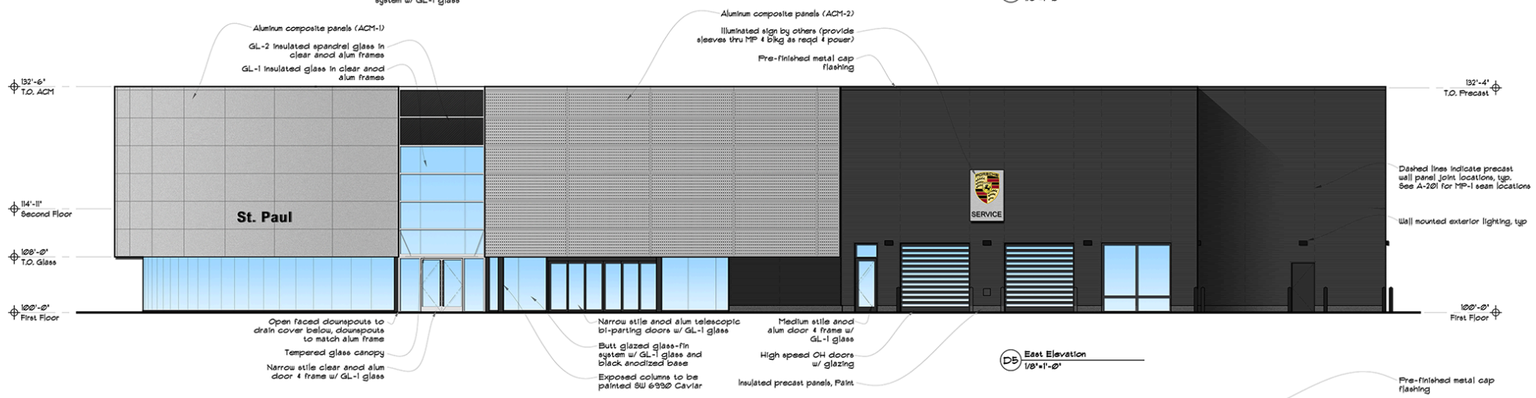
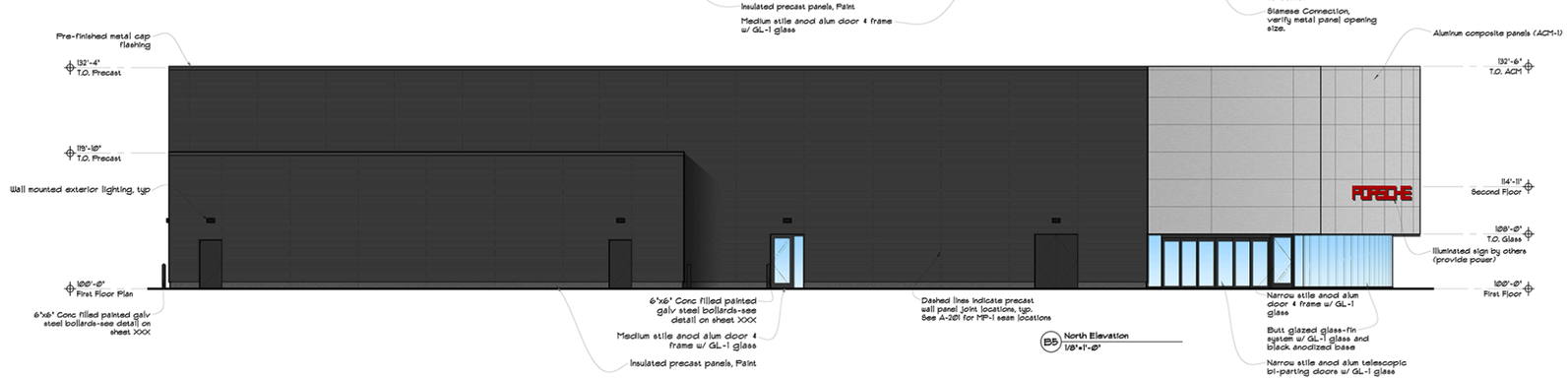


EB South Elevation
1/8"=1'-0"



DB East Elevation
1/8"=1'-0"

CB North Elevation
1/8"=1'-0"



EB North Elevation
1/8"=1'-0"

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Nguyen T. Hoang

Date: xx/xx/xxxx
Reg No: 50034

Sheet Title
Colored Exterior Elevations

Scale	1/8"=1'-0"
Date	10/06/2015
Comm No	2552

Sheet Number
A-202

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