PL202100026 Pre-App

SITE DEVELOPMENT PLANS
FOR
SICK - CAMPUS USA
PHASE 1

SECTION 01, TOWNSHIP 27, RANGE 24
BLOOMINGTON, HENNEPIN COUNTY, MN

PROJECT TEAM:

ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.

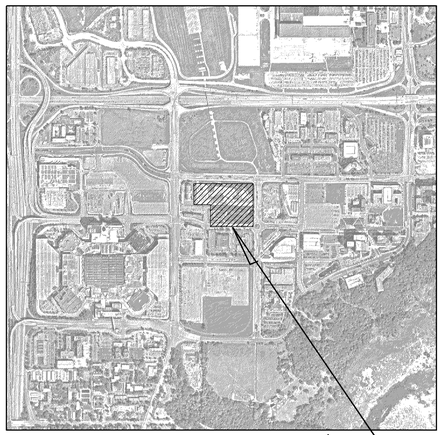
PREPARED BY: WILLIAM D. MATZEK, P.E.
767 EUSTIS STREET, SUITE 100
ST. PAUL, MN 55114
TELEPHONE (651) 643-0488

ARCHITECT
CLOW BERG
9800 BREN ROAD E, SUITE 290
HOPKINS, MN 55343
TELEPHONE: (612) 345-2559
CONTACT: MICHAEL BERG, AIA

SURVEYOR
SUNDE LAND SURVEYING
9001 EAST BLOOMINGTON FREEWAY, SUITE 118
BLOOMINGTON, MN 55420
TELEPHONE: (952) 881-2455
CONTACT: ARLEE J. CARLSON, P.L.S.

GEOTECHNICAL ENGINEER
BRAUN INTERTEC
11001 HAMPSHIRE AVENUE S
MINNEAPOLIS, MN 55438
TELEPHONE:(952) 995-2000
CONTACT: CHRISTOPHER KEHL, PE, LEED AP

LANDSCAPE ARCHITECT
GARDENEER INC
572 BAVARIA LN
CHASKA, MN 55318
TELEPHONE: (952) 631-5502
CONTACT: TOM TRZYNKA



VICINITY
N.T.S.

NOTES:

1. CONTRACTOR SHALL CONFIRM THAT THE EXISTING CONDITIONS FOR THE SITE MATCH WHAT IS SHOWN ON THE DRAWINGS INCLUDED PRIOR TO CONSTRUCTION.
2. IF REPRODUCED, THE SCALES SHOWN ON THESE PLANS ARE BASED ON A 30x42 SHEET.
3. 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.
4. ALL GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS.

DRAWING INDEX

CLOW BERG
9800 Bren Road East Suite 290 Hopkins, Minnesota 55343 612-345-2559

Kimley»Horn
2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

revisions
No. date description

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.

WILLIAM D. MATZEK, P.E.
DATE: _____ LIC. NO. 45790

phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

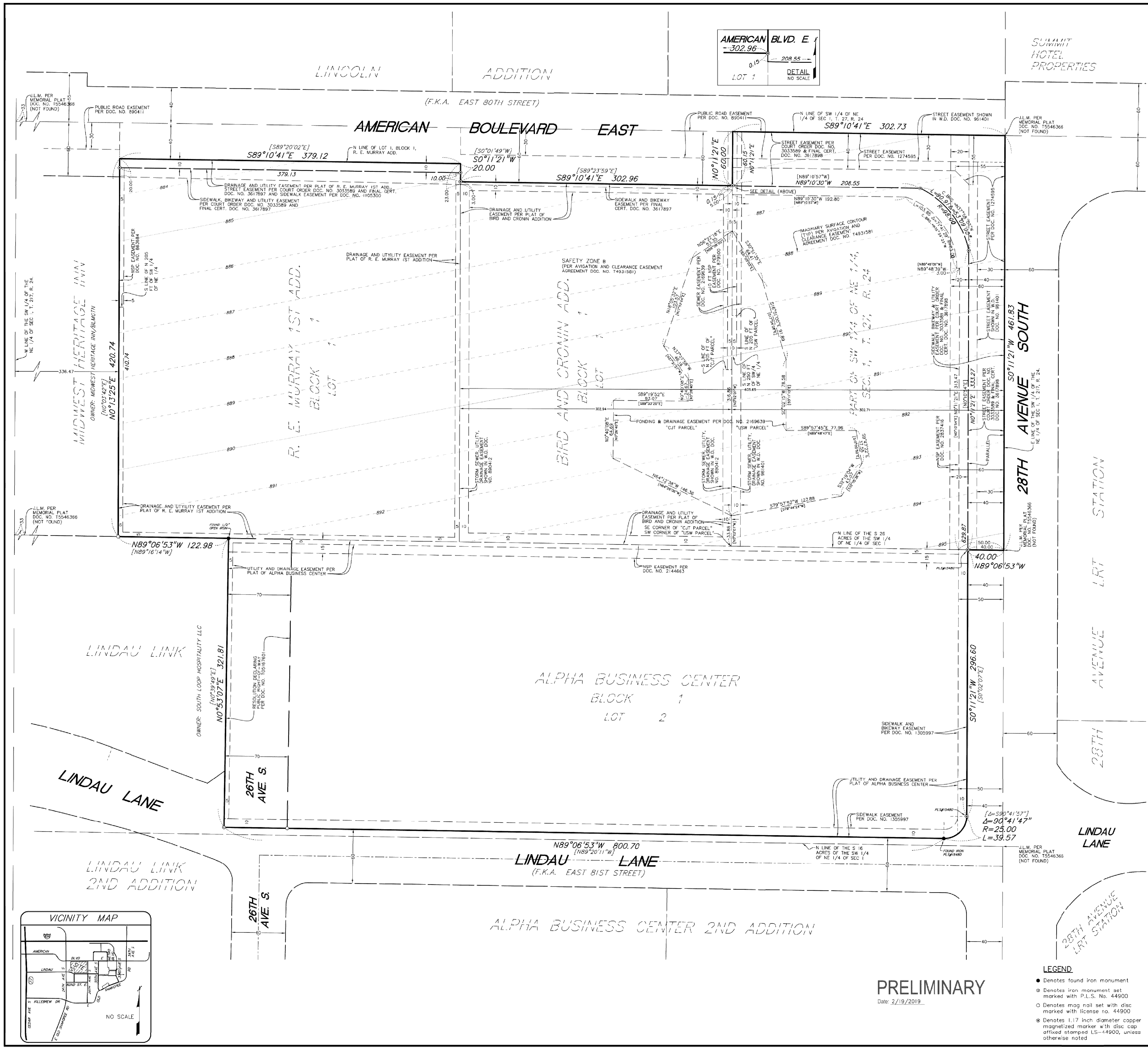
sheet title
COVER SHEET

sheet number
C000

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

PRELIMINARY - NOT FOR CONSTRUCTION

PL202100026 Pre-App



PRELIMINARY

Date: 2/19/2019

DESCRIPTION OF PROPERTY SURVEYED

(Per Certificate of Title No. 1372660 – Hennepin County, Minnesota)

Lot 2, Block 1, Alpha Business Center

Subject to utility and drainage easements as shown on the plat;

And

(Per Certificate of Title No. 1347057 – Hennepin County, Minnesota)

Lot 1, Block 1, R. E. Murray 1st Addition

The North and South lines of the above described tract have been judicially determined and have been marked by Judicial Landmarks pursuant to Torrens Case, No. 3819;

Subject to drainage and utility easements as shown on the plat;

And

(Per Certificate of Title No. 1347375 – Hennepin County, Minnesota)

Lot 1, Block 1, Bird And Cronin Addition,

Subject to an easement for the installation and maintenance of storm sewer, utility and drainage facilities over, upon, under and across the East 10 feet and the West 10 feet of the plat of Bird and Cronin Addition as shown in deed Doc. No. 890412, Files of Registrar of Titles;

Subject to drainage and utility easements as shown on the plats;

The boundaries of the above described plat have been judicially determined pursuant to order entered herein;

And

(Per Certificate of Title No. 1347056 – Hennepin County, Minnesota)

The East 302.71 feet of the following described tract: All of the Southwest 1/4 of the Northeast 1/4 of Section 1, Township 27, Range 24 West of the 4th P. M. except the South 26 acres thereof.

Subject to an easement over, upon and across the East 30 feet thereof for Street purposes as shown in deed Doc. No. 961401;

Subject to an easement for the installation and maintenance of storm sewer, utility and drainage purposes over, upon, under and across the West 10 feet thereof as shown in deed Doc. No. 961401;

PLAT RECORDING INFORMATION

The plat of ALPHA BUSINESS CENTER was filed of record on November 2, 1978, as R. T. Document No. 1301864 and on November 3, 1978 as C. R. Document No. 4426256.

The plat of R. E. MURRAY 1ST ADDTION was filed of record on December 27, 1973, as R. T. Document No. 1095211.

The plat of BIRD AND CRONIN ADDITION was filed of record on December 31, 1990, as R. T. Document No. 2146163.

[ ] Bearings and/or dimensions listed within brackets are per plat or record documents.

This survey was prepared without the benefit of current title work. Easements, appurtenances, and encumbrances may exist in addition to those shown hereon. This survey is subject to revision upon receipt of a current title insurance commitment or attorney's title opinion.

GENERAL NOTES

1.) Survey coordinate basis: Hennepin County Coordinate Syetem NAD 83 (1986 Adj.)

2.) No Buildings Observed on the surveyed property in the process of conducting the fieldwork.

3.) Adjoining ownership information shown hereon was obtained from the Hennepin County Property Tax Information web site.

4.) At the time fieldwork was performed for this survey, there was a significant amount of snow on the ground. Physical features were located to the best of our ability, but there may be additional features that were not visible and, therefore, not shown hereon.

UTILITY NOTES

1.) Utility information from plans and markings was combined with observed evidence of utilities to develop a view of the underground utilities shown hereon. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. In addition, Gopher State One Call locate requests from surveyors may be ignored or result in an incomplete response. Where additional or more detailed information is required, excavation and/or a private utility locate request may be necessary.

2.) Other underground utilities of which we are unaware may exist. Verify all utilities critical to construction or design.

3.) Some underground utility locations are shown as marked onsite by those utility companies whose locators responded to our Gopher State One Call, ticket number 190370101.

4.) Contact GOPHER STATE ONE CALL at 651-454-0002 (800-252-1166) for precise onsite location of utilities prior to any excavation.

FLOOD ZONE NOTE

1.) The subject property appears to lie within Zone X (Areas determined to be outside the 0.2% annual chance floodplain) per the National Flood Insurance Program, Flood Insurance Rate Map Community Panel No. 275230 0476 F, dated November 4, 2016. This information was obtained from the FEMA Map Service Center web site.

AREAS

Gross Area: 686,016 Sq. Ft. or 15.749 Acres
Net Area (Excludes Street easements and "Declared Public Right-of-Way"): 624,180 Square Feet or 14.323 Acres

I hereby certify that this survey, plan, or report 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.

Dated this ##?? day of February, 2019

SUNDE LAND SURVEYING, LLC.

By: ______________________
Arlee J. Carlson, P.L.S. Minn. Lic. No. 44900

LEGEND

- ● Denotes found iron monument
- ◎ Denotes iron monument set marked with P.L.S. No. 44900
- ○ Denotes mag nail set with disc marked with license no. 44900
- ⊙ Denotes 1.17 inch diameter copper magnetized marker with disc cap affixed stamped LS-44900, unless otherwise noted

N

40 0 40 80
SCALE IN FEET

Revision	By	Date

Drawing Title:
BOUNDARY, TOPOGRAPHIC, LOCATION AND UTILITY SURVEY FOR:
SICK, Inc.

SUNDE LAND SURVEYING
www.sunde.com
Main Office:
9001 East Bloomington Freeway (35W) • Suite 118
Bloomington, Minnesota 55420-3435
952-881-2455 (Fax: 952-888-9526)

Project: 2019-014	Bk/Pg: 763/72	Date: ##/##/####
Township: 27 Range: 24 Section: 01		Sheet: 1 of 3
File: 20190140001.dwg		

NOT TO SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

CLOW BERG
9800 Bren Road East, Suite 290 Hopkins, Minnesota 55343 612-345-2559

Kimley»Horn
© 2020 KIMLEY-HORN AND ASSOCIATES, INC.
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WILLIAM D. MATZEK, P.E.

DATE: ________ MN LIC. NO. 45790

phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

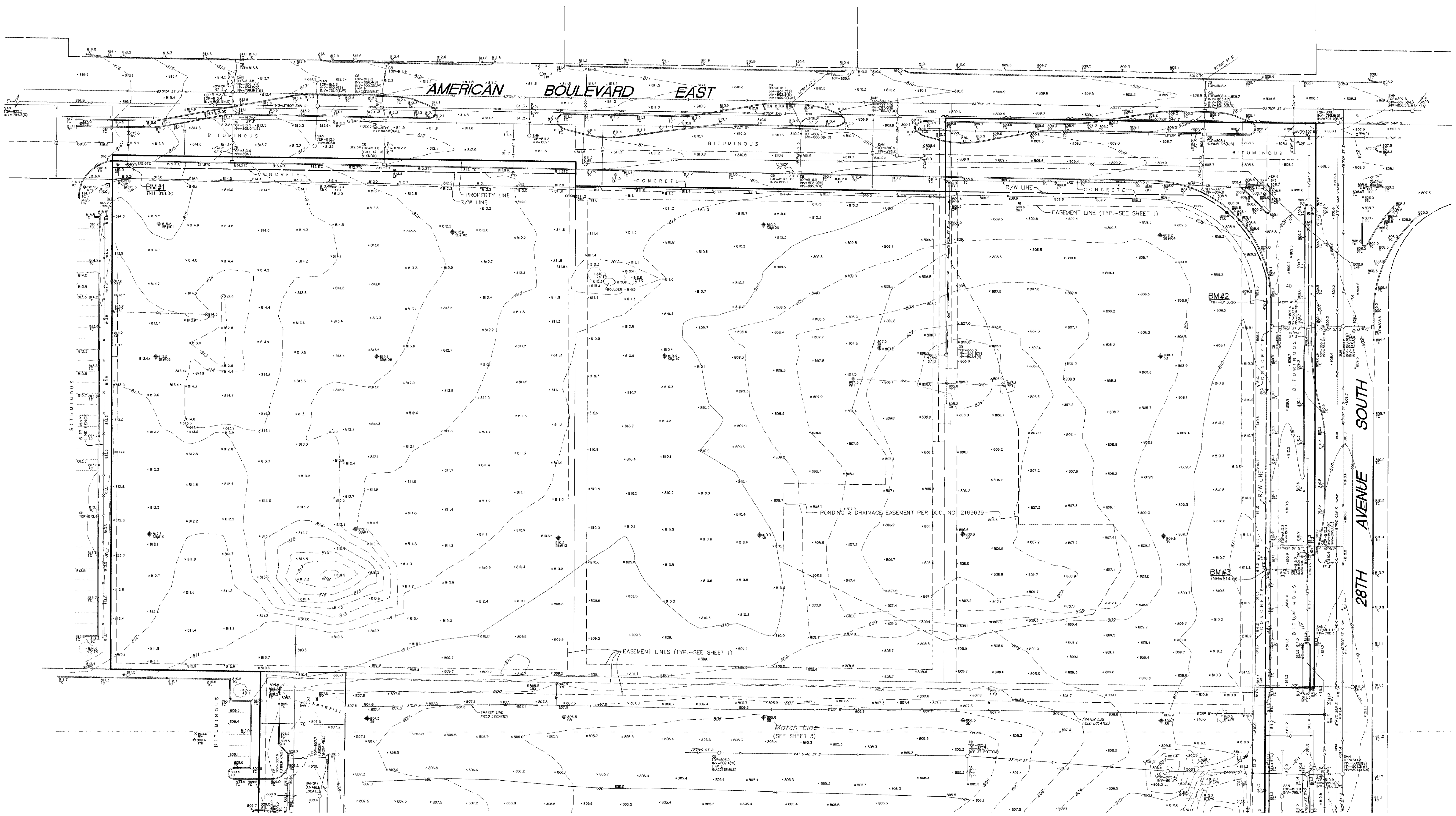
sheet title

BOUNDARY, TOPOGRAPHIC, LOCATION AND UTILITY SURVEY

sheet number

C001

PL202100026 Pre-App



BENCHMARKS (BM)

(NGVD 29)

1.) Top of top nut of first fire hydrant east of 24th Ave. S. on south side of American Blvd.
Elevation = 818.30 feet

2.) Top of top nut of first fire hydrant south of American Blvd. on west side of 28th Ave. S.
Elevation = 813.00 feet

3.) Top of top nut of second fire hydrant south of American Blvd. on west side of 28th Ave. S.
Elevation = 814.06 feet

LEGEND

BM	Denotes benchmark
BTC	Denotes top of bituminous curb
BTL	Denotes beaver tail curb
CB	Denotes catch basin
CBOX	Denotes control box
CBX	Denotes communication box
CMH	Denotes communication manhole
DIP	Denotes ductile iron pipe
EMH	Denotes electric manhole
EVG	Denotes coniferous tree
G	Denotes gutter
GW	Denotes guy wire
HCR	Denotes handicap ramp
HYD	Denotes fire hydrant
INV	Denotes structure invert
JLM	Denotes Judicial Landmark
LP	Denotes light pole
MH	Denotes manhole
OHE	Denotes overhead electric line
(P)	Denotes per plan/not field verified
PKS	Denotes parking sign
PP	Denotes power pole
PPLP	Denotes power and light pole
PPT	Denotes power pole with transformer
PPU	Denotes power pole with underground utility
PVC	Denotes polyvinyl chloride pipe
RCP	Denotes reinforced concrete pipe
SAN	Denotes sanitary manhole
SAN S	Denotes sanitary sewer
SB	Denotes soil boring
SMH	Denotes storm manhole
ST S	Denotes storm sewer
STC	Denotes top of surmountable curb
TC	Denotes top of concrete curb
TCS	Denotes traffic control sign
TNH	Denotes top of top nut of fire hydrant
TR	Denotes deciduous tree
TRANS	Denotes transformer box
UGC	Denotes underground communication line
UGE	Denotes underground electric line
UGG	Denotes underground gas
W	Denotes water line
WV	Denotes water valve

N

30 0 30 60
SCALE IN FEET

PRELIMINARY
Date: 2/19/2019

Dated this XX day of February, 2019

Certified by: ______________________
Arlee J. Carlson, P.L.S. Minn. Lic. No. 44900

SEE SHEET 1 FOR BOUNDARY AND EASEMENT DETAIL

Revision	By	Date
	DJF	

Drawing Title:
BOUNDARY, TOPOGRAPHIC, LOCATION AND UTILITY SURVEY FOR:
SICK, Inc.

SUNDE LAND SURVEYING
www.sunde.com
Main Office:
9001 East Bloomington Freeway (35W) • Suite 118
Bloomington, Minnesota 55420-3435
952-881-2455 (Fax: 952-888-9526)

Project: 2019-014 Bk/Pg: 763/72
Township: 27 Range: 24 Section: 01
File: 2019014001.dwg
Date: ##/##/####
Sheet: 2 of 3

NOT TO SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

CLOW BERG

Kimley»Horn
2020 KIMLEY-HORN AND ASSOCIATES, INC.
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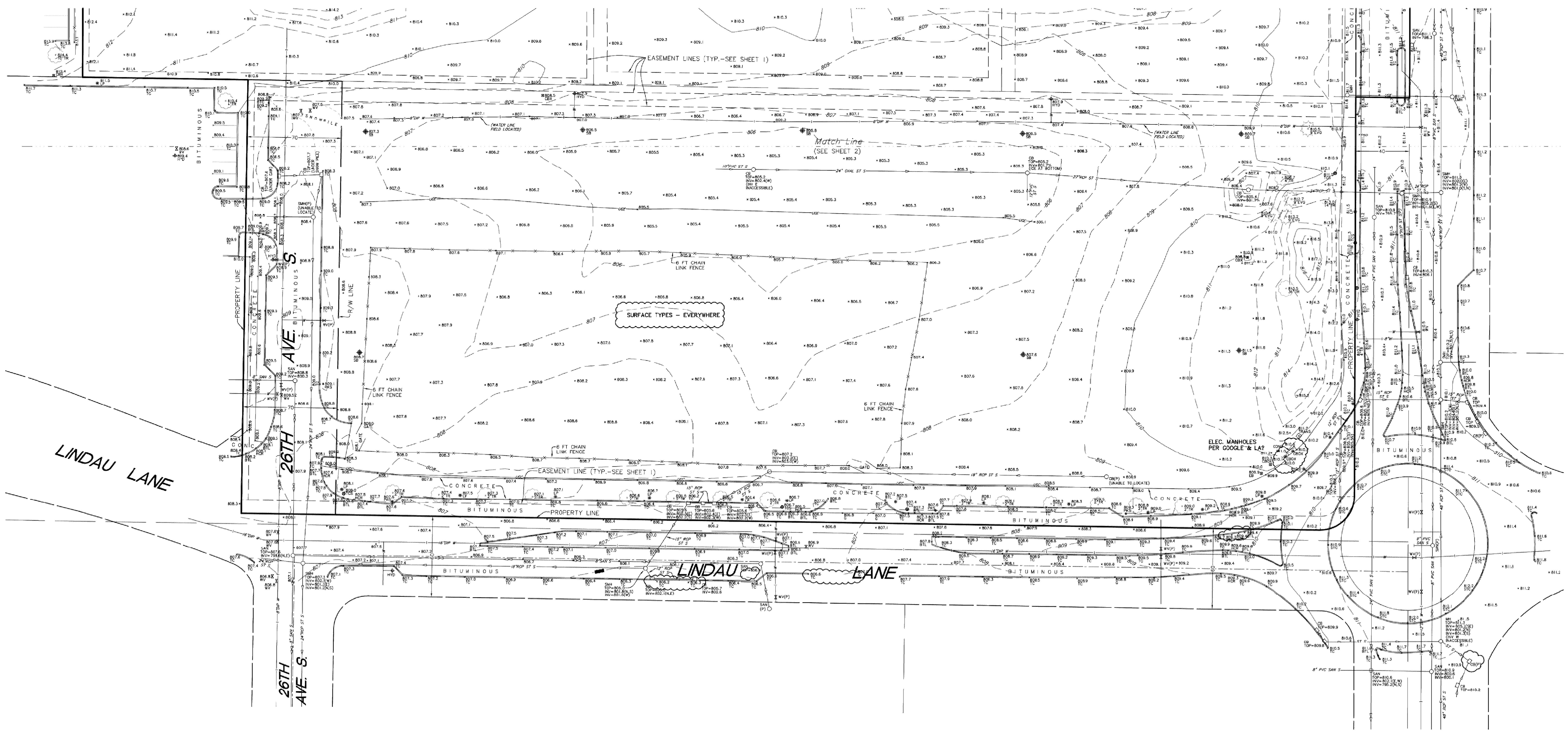
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

sheet title
BOUNDARY, TOPOGRAPHIC, LOCATION AND UTILITY SURVEY

sheet number
C002

PL202100026 Pre-App



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Arlee J. Carlson, P.L.S. Minn. Lic. No. 44900

SEE SHEET 1 FOR BOUNDARY AND EASEMENT DETAIL

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SICK, Inc.

SUNDE LAND SURVEYING
www.sunde.com
Main Office:
9001 East Bloomington Freeway (35W) • Suite 118
Bloomington, Minnesota 55420-3435
952-881-2455 (Fax: 952-888-9526)

Project: 2019-014 Bk/Pg: 763/72
Township: 27 Range: 24 Section: 01
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date	02.09.2021
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SICK - CAMPUS USA
PHASE 1

sheet title
BOUNDARY, TOPOGRAPHIC, LOCATION AND UTILITY SURVEY

sheet number
C003

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE MN DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" (LATEST EDITION) AND BECOME FAMILIAR WITH THE CONTENTS PRIOR TO COMMENCING WORK, AND, UNLESS OTHERWISE NOTED, ALL WORK SHALL CONFORM AS APPLICABLE TO THESE STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER DELETERIOUS MATERIAL.
3. THE EXISTING SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS QUALITY LEVEL "D" UNLESS OTHERWISE NOTED. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ACSE 38/02, ENTITLED STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF SUBSURFACE QUALITY DATA BY THE FHA. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND BONDS IF REQUIRED PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
7. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.
8. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER DIRECTLY FROM THE TESTING AGENCY.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF MN PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.
10. ANY WELLS DISCOVERED ON SITE THAT WILL HAVE NO USE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED.
11. ANY WELL DISCOVERED DURING EARTH MOVING OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES WITHIN 24 HOURS AFTER DISCOVERY IS MADE.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.
13. SHOULD CONTRACTOR ENCOUNTER ANY DEBRIS LADEN SOIL, STRUCTURES NOT IDENTIFIED IN THE DOCUMENTS, OR OTHER SOURCE OF POTENTIAL CONTAMINATION, THEY SHALL IMMEDIATELY CONTACT THE ENGINEER AND OWNER.

EROSION CONTROL MAINTENANCE

ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION AS REQUIRED BY ALL JURISDICTIONS UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A CERTIFIED PERSON AT LEAST ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

1. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED. FOR MAINTENANCE REQUIREMENTS REFER TO THE STANDARD SPECIFICATIONS.
2. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE SILT FENCE.
3. THE CONSTRUCTION ENTRANCE(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
4. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
5. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.

TYPICAL OWNER/ENGINEER OBSERVATIONS

CONTRACTOR SHALL NOTIFY OWNER AND/OR ENGINEER 48 HOURS IN ADVANCE OF THE FOLLOWING ACTIVITIES:

- PRE-CONSTRUCTION MEETING, SUBGRADE PREPARATION, BASE INSTALLATION ASPHALT INSTALLATION, UNDERGROUND PIPING AND UTILITIES INSTALLATION, INSTALLATION OF STRUCTURES, CHECK VALVES, HYDRANTS, METERS, ETC., SIDEWALK INSTALLATION, CONNECTIONS TO WATER AND SEWER MAINS, TESTS OF UTILITIES

EROSION CONTROL NOTES

1. THE STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") IS COMPRISED OF THE EROSION CONTROL PLAN, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN THE SPECIFICATIONS OF THE SWPPP, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
2. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF MN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
3. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.
4. SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ON A PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY. WHEN WASHING IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ALL FINES IMPOSED FOR DISCHARGING SEDIMENT ONTO PUBLIC AREAS SHALL BE PAID BY THE CONTRACTOR.
5. TEMPORARY SEEDING OR OTHER APPROVED METHODS OF STABILIZATION SHALL BE INITIATED WITHIN 7 DAYS OF THE LAST DISTURBANCE ON ANY AREA OF THE SITE.
6. THE CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
7. CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ON SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
12. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THE PLAN SHALL BE INITIATED AS SOON AS IS PRACTICABLE.
13. ALL STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. OTHERWISE, COVERING OR ENCIRCLING THESE AREAS WITH SOME PROTECTIVE MEASURE WILL BE NECESSARY.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING ANY EROSION CONTROL DEVICE WHICH THEY DISTURB. EACH CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES THAT MAY LEAD TO UNAUTHORIZED DISCHARGE OR STORM WATER POLLUTION, SEDIMENTATION, OR OTHER POLLUTANTS. UNAUTHORIZED POLLUTANTS INCLUDE (BUT ARE NOT LIMITED TO) EXCESS CONCRETE DUMPING OR CONCRETE RESIDUE, PAINTS, SOLVENTS, GREASES, FUEL AND LUBRICANT OIL, PESTICIDES, AND ANY SOLID WASTE MATERIALS.
15. EROSION CONTROL DEVICES SHOWN ON THESE PLANS SHALL BE INSTALLED PRIOR TO THE START OF LAND-DISTURBING ACTIVITIES ON THE PROJECT.
16. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THIS PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND THE CITY OF BLOOMINGTON ENGINEERING DIVISION.
17. IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE SEDIMENTATION FROM THE PROJECT, THE EROSION CONTROL PLAN WILL HAVE TO BE REVISED AND/OR ADDITIONAL EROSION CONTROL DEVICES WILL BE REQUIRED ON SITE. ANY REVISIONS TO THE EROSION CONTROL PLAN MADE BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER.

PAVING AND STRIPING NOTES

1. ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN JURISDICTION'S RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OR MN/DOT SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.
2. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D) AND CITY STANDARDS.
3. CONTRACTOR SHALL FURNISH ALL PAVEMENT MARKINGS FOR FIRE LANES, ROADWAY LANES, PARKING STALLS, ACCESSIBLE PARKING SYMBOLS, ACCESS AISLES, STOP BARS AND SIGNS, AND MISCELLANEOUS STRIPING WITHIN THE PARKING LOT AS SHOWN ON THE PLANS.
4. ALL EXPANSION JOINTS SHALL EXTEND THROUGH THE CURB.
5. THE MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS SHALL BE 2 FEET.
6. ALL JOINTS, INCLUDING EXPANSION JOINTS WITH REMOVABLE TACK STRIPS, SHALL BE SEALED WITH JOINT SEALANT.
7. THE MATERIALS AND PROPERTIES OF ALL CONCRETE SHALL MEET THE APPLICABLE REQUIREMENTS IN THE A.C.I. (AMERICAN CONCRETE INSTITUTE) MANUAL OF CONCRETE PRACTICE.
8. CONTRACTOR SHALL APPLY A SECOND COATING OVER ALL PAVEMENT MARKINGS PRIOR TO ACCEPTANCE BY OWNER FOLLOWED BY A COAT OF GLASS BEADS AS APPLICABLE PER THE PROJECT DOCUMENTS.
9. ANY EXISTING PAVEMENT, CURBS AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE TO THE SATISFACTION OF THE ENGINEER AND OWNER.
10. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY SUITABLE ACCESSIBLE ROUTES (PER A.D.A). 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% (1.5% 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 A.D.A COMPLIANCE ISSUES.
11. MAXIMUM JOINT SPACING IS TWICE THE DEPTH OF THE CONCRETE PAVEMENT IN FEET.

GRADING AND DRAINAGE NOTES

1. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE START OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
2. THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL ADJUST BMP'S AS NECESSARY AND REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL A GRASS STAND IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.
3. CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS SO THAT SURFACE RUNOFF WILL DRAIN BY GRAVITY TO NEW OR EXISTING DRAINAGE OUTLETS. CONTRACTOR SHALL ENSURE NO PONDING OCCURS IN PAVED AREAS AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.
4. CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION. EXISTING CASTINGS AND STRUCTURES TO REMAIN SHALL BE ADJUSTED TO MATCH THE PROPOSED FINISHED GRADES.
5. BACKFILL FOR UTILITY LINES SHALL BE PLACED PER DETAILS, STANDARDS, AND SPECIFICATIONS SO THAT THE UTILITY WILL BE STABLE. WHERE UTILITY LINES CROSS THE PARKING LOT, THE TOP 6 INCHES SHALL BE COMPACTED SIMILARLY TO THE REMAINDER OF THE LOT. UTILITY DITCHES SHALL BE VISUALLY INSPECTED DURING THE EXCAVATION PROCESS TO ENSURE THAT UNDESIRABLE FILL IS NOT USED.
6. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF 4" OF TOPSOIL AT COMPLETION OF WORK. ALL UNPAVED AREAS IN EXISTING RIGHTS-OF-WAY DISTURBED BY CONSTRUCTION SHALL BE REGRADED AND SODDED.
7. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORM RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED.
8. WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL SAW CUT FULL DEPTH FOR A SMOOTH AND STRAIGHT JOINT AND REPLACE THE PAVEMENT WITH THE SAME TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS INDICATED.
9. THE CONTRACTOR SHALL INSTALL PROTECTION OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.
10. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE DESIGN ENGINEER PRIOR TO ANY EXCAVATION.
11. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY OR TO MN/DOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
12. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED AS SHOWN ON THE LANDSCAPING PLAN.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
14. SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.
15. THE CONTRACTOR SHALL ENSURE THAT LANDSCAPE ISLAND PLANTING AREAS AND OTHER PLANTING AREAS ARE NOT COMPACTED AND DO NOT CONTAIN ROAD BASE MATERIALS. THE CONTRACTOR SHALL ALSO EXCAVATE AND REMOVE ALL UNDESIRABLE MATERIAL FROM ALL AREAS ON THE SITE TO BE PLANTED AND PROPERLY DISPOSED OF IN A LEGAL MANNER.
16. THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS AND MN/DOT SPECIFICATION.
17. ALL CONCRETE/ASPHALT SHALL BE INSTALLED PER GEOTECH REPORT, CITY OF BLOOMINGTON AND MN/DOT SPECIFICATIONS.
18. SPOT ELEVATIONS ARE TO FLOWLINE OF CURB UNLESS OTHERWISE NOTED.
19. LIMITS OF CONSTRUCTION ARE TO THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED ON THE PLAN.
20. IMMEDIATELY REPORT TO THE OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS.
21. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION WITHOUT COMPENSATION.
22. BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
23. ALL PROPOSED GRADES ONSITE SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS. ANY SLOPES STEEPER THAN 4:1 REQUIRE EROSION AND SEDIMENT CONTROL BLANKET.
24. ADHERE TO ALL TERMS AND CONDITIONS AS NECESSARY IN THE GENERAL N.P.D.E.S. PERMIT AND STORMWATER POLLUTION PREVENTION PLAN FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
25. ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
26. CONTRACTOR SHALL ENSURE MINIMUM GRADES ARE MET WITHIN PAVED AREAS, 1.2% FOR ASPHALT PAVING AND 0.6% FOR CONCRETE PAVING.

3RD PARTY TEST REPORTS REQ'D

TEST REPORTS REQUIRED FOR CLOSE OUT INCLUDE, BUT ARE NOT LIMITED TO:

- DENSITY TEST REPORTS
- BACTERIOLOGICAL TESTS OF WATER SYSTEM
- PRESSURE TEST OF WATER/SEWER
- LEAK TESTS ON SEWER SYSTEM AND GREASE TRAPS
- ANY OTHER TESTING REQUIRED BY THE AGENCY/MUNICIPALITY

WATER STORM SEWER & SANITARY SEWER NOTES

1. THE CONTRACTOR SHALL CONSTRUCT GRAVITY SEWER LATERALS, MANHOLES, GRAVITY SEWER LINES, AND DOMESTIC WATER AND FIRE PROTECTION SYSTEM AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS, EQUIPMENT, MACHINERY, TOOLS, MEANS OF TRANSPORTATION AND LABOR NECESSARY TO COMPLETE THE WORK IN FULL AND COMPLETE ACCORDANCE WITH THE SHOWN, DESCRIBED AND REASONABLY INTENDED REQUIREMENTS OF THE CONTRACT DOCUMENTS AND JURISDICTIONAL AGENCY REQUIREMENTS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
2. ALL EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR UTILITY LOCATION AND COORDINATION IN ACCORDANCE WITH THE NOTES CONTAINED IN THE GENERAL CONSTRUCTION SECTION OF THIS SHEET.
3. THE CONTRACTOR SHALL RESTORE ALL DISTURBED VEGETATION IN KIND, UNLESS SHOWN OTHERWISE.
4. DEFLECTION OF PIPE JOINTS AND CURVATURE OF PIPE SHALL NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS. SECURELY CLOSE ALL OPEN ENDS OF PIPE AND FITTINGS WITH A WATERTIGHT PLUG WHEN WORK IS NOT IN PROGRESS. THE INTERIOR OF ALL PIPES SHALL BE CLEAN AND JOINT SURFACES WIPED CLEAN AND DRY AFTER THE PIPE HAS BEEN LOWERED INTO THE TRENCH. VALVES SHALL BE PLUMB AND LOCATED ACCORDING TO THE PLANS.
5. ALL PIPE AND FITTINGS SHALL BE CAREFULLY STORED FOLLOWING MANUFACTURER'S RECOMMENDATIONS. CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE COATING OR LINING IN ANY D.I. PIPE FITTINGS. ANY PIPE OR FITTING WHICH IS DAMAGED OR WHICH HAS FLAWS OR IMPERFECTIONS WHICH, IN THE OPINION OF THE ENGINEER OR OWNER, RENDERS IT UNFIT FOR USE, SHALL NOT BE USED. ANY PIPE NOT SATISFACTORY FOR USE SHALL BE CLEARLY MARKED AND IMMEDIATELY REMOVED FROM THE JOB SITE, AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
6. WATER FOR FIRE FIGHTING SHALL BE MADE AVAILABLE FOR USE BY THE CONTRACTOR PRIOR TO COMBUSTIBLES BEING BROUGHT ON SITE.
7. ALL UTILITY AND STORM DRAIN TRENCHES LOCATED UNDER AREAS TO RECEIVE PAVING SHALL BE COMPLETELY BACK FILLED IN ACCORDANCE WITH THE GOVERNING JURISDICTIONAL AGENCY'S SPECIFICATIONS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
8. UNDERGROUND LINES SHALL BE SURVEYED BY A STATE OF MN PROFESSIONAL LAND SURVEYOR PRIOR TO BACK FILLING.
9. CONTRACTOR SHALL PERFORM, AT HIS OWN EXPENSE, ANY AND ALL TESTS REQUIRED BY THE SPECIFICATIONS AND/OR ANY AGENCY HAVING JURISDICTION. THESE TESTS MAY INCLUDE, BUT MAY NOT BE LIMITED TO, INFILTRATION AND EXFILTRATION, TELEVISION INSPECTION AND A MANDREL TEST ON GRAVITY SEWER. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE UTILITY PROVIDER, OWNER AND JURISDICTIONAL AGENCY AS REQUIRED.
10. CONTRACTOR SHALL PROVIDE FOR A MINIMUM HORIZONTAL CLEARANCE OF 10' AND A VERTICAL CLEARANCE OF 18" BETWEEN WATER AND SANITARY SEWER MANHOLES AND LINES.
11. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
12. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT UNLESS OTHERWISE STATED BY CITY AND STATE DESIGN STANDARDS AND SPECIFICATIONS.
13. UNLESS OTHERWISE STATED IN CITY AND STATE DESIGN STANDARDS AND SPECIFICATIONS, ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER". EXISTING CASTINGS AND STRUCTURES WITHIN PROJECT LIMITS SHALL BE ADJUSTED TO MEET THESE CONDITIONS AND THE PROPOSED FINISHED GRADE.
14. TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
15. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
16. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT OUT.
17. ROOF DRAINS SHALL BE CONNECTED TO STORM SEWER BY PREFABRICATED WYES OR AT STORM STRUCTURES. ROOF DRAINS AND TRUCK WELL DRAIN SHALL RUN AT A MINIMUM 1% SLOPE, UNLESS NOTED OTHERWISE, AND TIE IN AT THE CENTERLINE OF THE STORM MAIN.
18. ALL ROOF AND SANITARY SEWER DRAINS SHALL BE INSULATED IF 7' OF COVER CANNOT BE PROVIDED.
19. THE CONTRACTOR SHALL PROTECT EXISTING UNDERGROUND UTILITIES AND APPURTENANCES THAT ARE TO REMAIN FROM DAMAGE DURING CONSTRUCTION OPERATIONS.
20. THE LOCATION OF EXISTING UTILITIES, STORM DRAINAGE STRUCTURES AND OTHER ABOVE AND BELOW-GRADE IMPROVEMENTS ARE APPROXIMATE AS SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE AND INVERT ELEVATIONS OF EACH PRIOR TO THE START OF CONSTRUCTION.
21. A MINIMUM OF 5' SEPARATION IS REQUIRED BETWEEN UTILITIES AND TREES UNLESS A ROOT BARRIER IS UTILIZED.
22. GAS, PHONE AND ELECTRIC SERVICES SHOWN FOR INFORMATIONAL PURPOSES ONLY. DRY UTILITY COMPANIES MAY ALTER THE DESIGN LAYOUT DURING THEIR REVIEW. CONTRACTOR TO COORDINATE FINAL DESIGN AND INSTALLATION WITH UTILITY COMPANIES.
23. COORDINATE UTILITY INSTALLATION WITH IRRIGATION DESIGN AND INSTALLATION.
24. ALL DIMENSIONS ARE TO FLOW LINE OF CURB UNLESS OTHERWISE NOTED. PERIMETER WALL DIMENSIONS ARE TO INSIDE WALL FACE. REFERENCE ARCHITECTURAL PLANS FOR EXACT WALL WIDTH AND SPECIFICATIONS.
25. REFERENCE ARCHITECTURAL PLANS (BY OTHERS). FOR EXACT BUILDING DIMENSIONS, AND MATERIALS SPECIFICATIONS.
26. REFERENCE M.E.P. PLANS (BY OTHERS) FOR MECHANICAL EQUIPMENT DIMENSIONS AND SPECIFICATIONS.
27. CONTRACTOR SHALL REFERENCE STRUCTURAL PLANS (BY OTHERS) FOR MECHANICAL EQUIPMENT DIMENSIONS AND PAD PREPARATION SPECIFICATIONS.
28. CONTRACTOR SHALL REFERENCE M.E.P PLANS (BY OTHERS) FOR LIGHT POLE WIRING.

REFER TO PRELIMINARY GEOTECHNICAL
EVALUATION REPORT No. B1901159
BRAUN INTERTEC
2600 LINDAU LANE
DATED 03/21/2019

PRELIMINARY - NOT FOR CONSTRUCTION

CLOW BERG
9800 Bren Road East ,Suite 200 Hopkins, Minnesota 55343 612-345-2559

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

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revisions
no. date description

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.

WILLIAM D. MATZEK, P.E.

DATE: ____________ MN LIC. NO. 45790

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date	02.09.2021
drawn by	LEC
checked by	WDM
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project name	

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PHASE 1

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GENERAL NOTES

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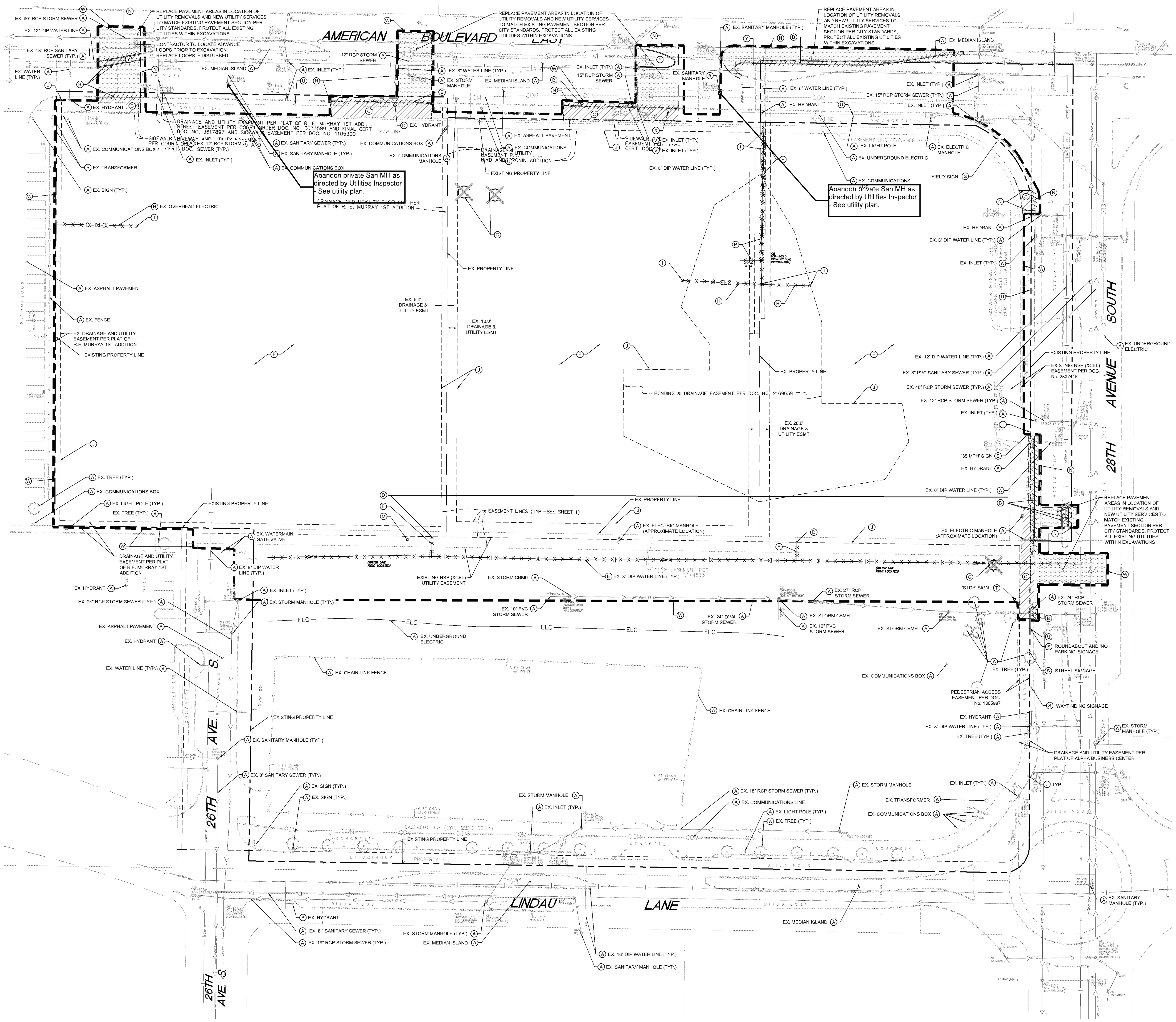
C100



DEMOLITION PLAN NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC. SUCH THAT THE IMPROVEMENTS ON THE PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE PROJECT DOCUMENTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL. CONTRACTOR SHALL PROVIDE COPIES OF THE PERMIT AND RECEIPTS OF DISPOSAL OF MATERIALS TO THE OWNER AND OWNERS REPRESENTATIVE.
3. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO ADJACENT PROPERTIES AT ALL TIMES. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM THE CONSTRUCTION MANAGER AND COORDINATION WITH THE ADJACENT PROPERTIES AND/OR THE CITY.
4. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
5. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR LOCATIONS OF EXISTING UTILITIES WITHIN ALL AREAS OF PROPOSED WORK.
6. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS ANY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PRECEDING WITH THE WORK.
7. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC, AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN ANY ROAD RIGHT-OF-WAY DURING CONSTRUCTION.
8. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE CONSTRUCTION MANAGER. ALL AFFECTED ROADS ARE LOCAL, SO TRAFFIC CONTROL MUST BE APPROVED BY CITY OF BLOOMINGTON. IF ANY TRAFFIC CONTROL EXTENDS TO 24TH AVE, HENNEPIN COUNTY WILL NEED TO APPROVE TRAFFIC CONTROL. MAINTENANCE OF TRAFFIC CONTROL SHALL BE COORDINATED IN ACCORDANCE WITH BLOOMINGTON, HENNEPIN COUNTY AND MN/DOT AS NECESSARY.
9. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES DURING CONSTRUCTION, AND SHALL NOTIFY ALL PROPERTIES IF ACCESS WILL BE INTERRUPTED OR ALTERED AT ANY TIME DURING CONSTRUCTION.
10. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
11. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
12. THE CONTRACTOR SHALL COORDINATE WATER MAIN WORK WITH THE FIRE DEPT. AND THE CITY WATER DEPARTMENT TO PLAN PROPOSED IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE THROUGHOUT THIS SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATER MAIN SHUT OFFS WITH THE CITY OF BLOOMINGTON DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATER MAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION WILL BE PROVIDED.
13. REFER TO SURVEY FOR ALL EXISTING INVERT AND RIM ELEVATIONS.
14. ALL UTILITIES SHOWN ARE EXISTING UTILITIES.
15. IN THE EVENT A WELL IS FOUND, THE CONTRACTOR SHALL CONTACT THE ENGINEER AND OWNER IMMEDIATELY. ALL WELLS SHALL BE SEALED BY A LICENSED WELL CONTRACTOR IN ACCORDANCE WITH ALL STATE OF MN REQUIREMENTS.
16. IN THE EVENT THAT UNKNOWN CONTAINERS OR TANKS ARE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE OWNER AND/OR OWNERS REPRESENTATIVE IMMEDIATELY. ALL CONTAINERS SHALL BE DISPOSED OF AT A PERMITTED LANDFILL PER THE PROJECT DOCUMENTS.
17. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY EXISTING DRAINTILE IS ENCOUNTERED ON SITE. NO ACTIVE DRAINTILE SHALL BE REMOVED WITHOUT APPROVAL FROM THE ENGINEER.
18. CONTRACTOR TO REFER TO PHASE II ESA TO RAP/CCP PREPARED BY LANDMARK ENVIRONMENTAL, LLC FOR REMOVAL OF CONTAMINATED MATERIAL.
19. CONTRACTOR TO LOCATE ADVANCE LOOPS PRIOR TO EXCAVATION AND REPLACE IF DISTURBED.
20. ALL CONSTRUCTION AND POST-CONSTRUCTION PARKING AND STORAGE OF EQUIPMENT AND MATERIALS MUST BE LOCATED ON-SITE. USE OF PUBLIC STREETS FOR PRIVATE CONSTRUCTION PARKING, LOADING/UNLOADING, AND STORAGE WILL NOT BE ALLOWED.

LEGEND

- PROPERTY LINE
- REMOVE BITUMINOUS SURFACE
- REMOVE CONCRETE SURFACE
- FULL DEPTH SAWCUT
- REMOVE TREE
- REMOVE CONCRETE CURB & GUTTER
- REMOVE UTILITY LINES
- REMOVE CHAIN LINK FENCE
- LIMITS OF CONSTRUCTION
- EXISTING OVERHEAD ELECTRIC (O-ELC)
- EXISTING UNDERGROUND ELECTRIC (ELC)
- EXISTING CHAINLINK FENCE
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING WATERMAIN
- EXISTING COMMUNICATIONS CABLE (COM)
- EXISTING CONTOUR (928)
- EXISTING CURB
- EXISTING TRAFFIC SIGN
- EXISTING NO PARKING SIGN
- EXISTING STORM MANHOLE / STORM CATCHBASIN / SANITARY MANHOLE
- EXISTING STORM CATCHBASIN (ON CURB)
- EXISTING GATE VALVE
- EXISTING HYDRANT
- EXISTING ELECTRICAL TRANSFORMER
- EXISTING COMMUNICATIONS BOX
- EXISTING LIGHT POLE
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE

KEYNOTE LEGEND

A	PROTECT IN PLACE
B	REMOVE EX. CONCRETE CURB TO NEAREST JOINT, LIMITS PER PLAN
C	REMOVE EX. CONCRETE SIDEWALK TO NEAREST JOINT, LIMITS PER PLAN
D	REMOVE EX. HYDRANT PER CITY OF BLOOMINGTON STANDARDS AND SPECIFICATIONS
E	REMOVE EX. WATER LINE, SIZE, MATERIAL, AND LIMITS PER PLAN
F	CLEARING AND GRUBBING AS NECESSARY FOR IMPROVEMENTS
G	REMOVE EX. TREE
H	REMOVE EX. OVERHEAD POWER LINE PER XCEL ENERGY AND CITY OF BLOOMINGTON STANDARDS AND SPECIFICATIONS
I	REMOVE EX. POWER POLE
J	EX. EASEMENT TO BE VACATED
K	REMOVE EX. UNDERGROUND UTILITY LINE
L	NOT USED
M	REMOVE EX. COMMUNICATIONS BOX
N	FULL DEPTH SAW CUT
O	REMOVE EX. GATE VALVE
P	REMOVE EX. STORM SEWER
Q	REMOVE EX. STORM SEWER CATCH BASIN
R	RECONSTRUCT EX. CATCH BASIN MANHOLE
S	PROTECT IN PLACE EX. SIGNAGE
T	REMOVE AND SALVAGE EX. SIGNAGE
U	PROTECT IN PLACE EX. STREET LIGHTING
V	ADJUST CASTING
W	LIMITS OF DISTURBANCE; OFFSET FROM PROPERTY LINE AND SAW CUTS FOR CLARITY
X	REMOVE, SALVAGE, AND REPLACE EX. STREET LIGHTING
Y	REMOVE AND REPLACE EXISTING LANDSCAPE ELEMENTS INCLUDING BUT NOT LIMITED TO EXISTING COLORED STAMPED CONCRETE, PLANTINGS, AND MULCH.

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80
SCALE: 1" = 40'

PRELIMINARY - NOT FOR CONSTRUCTION

CLOW BERG
9800 Bren Road East ,Suite 290 Hopkins, Minnesota 55343 612-345-2559

Kimley»Horn
2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

PL202100026 Pre-App

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WILLIAM D. MATZEK, P.E.

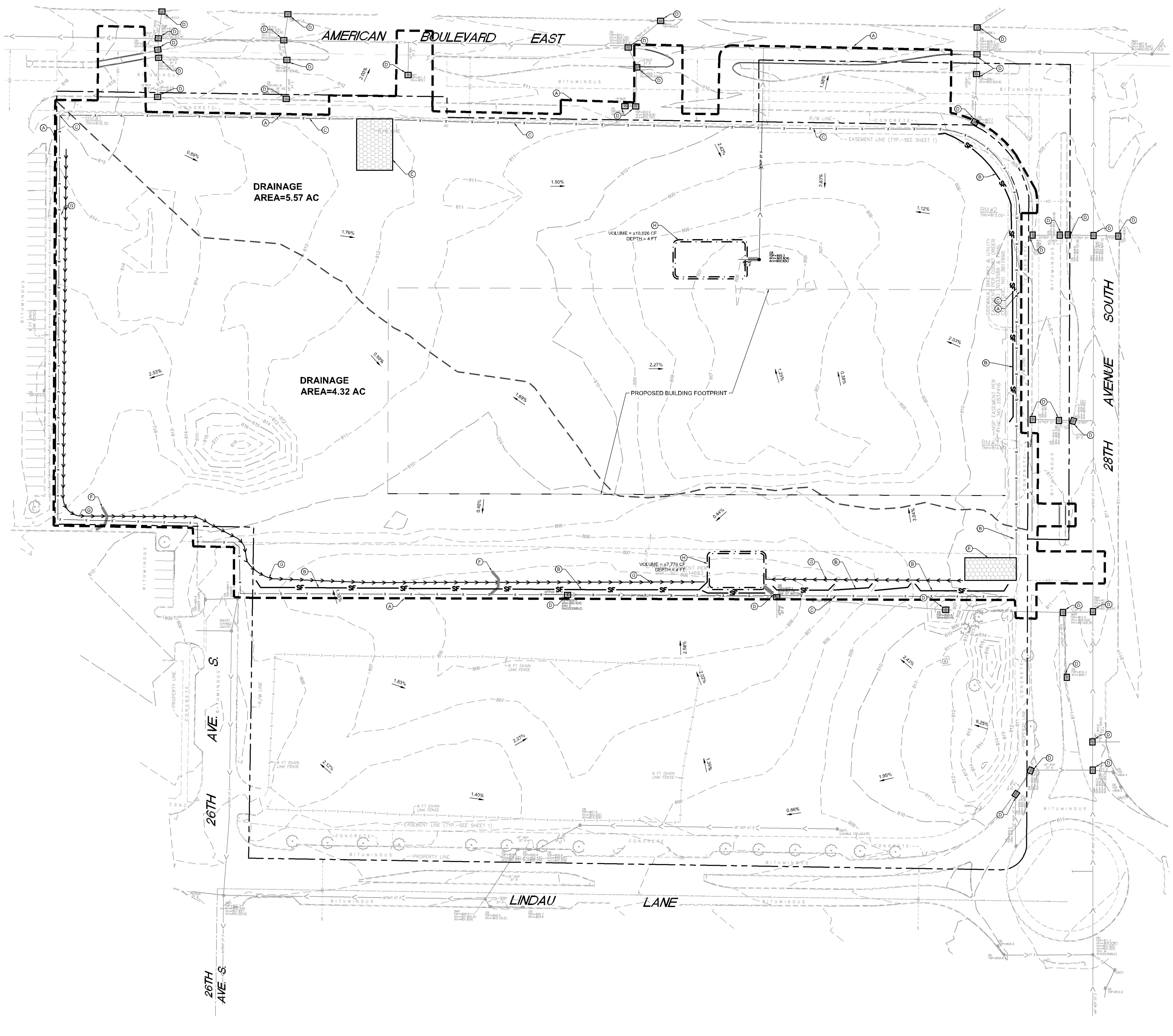
DATE: ______ MN LIC. NO. 45790

phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

DEMOLITION PLAN

C200



LEGEND

- ROCK ENTRANCE
- INLET PROTECTION
- SILT FENCE
- LIMITS OF DISTURBANCE
- APPROXIMATE GRADE BREAK
- SAFETY FENCE
- DIVERSION DITCH
- TEMPORARY CHECK DAM
- SEDIMENT TRAP BASIN
- RIP-RAP

EROSION CONTROL PLAN NOTES

1. ALL PERIMETER SILT FENCE AND ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL CONSTRUCT DRAINAGE BASINS PRIOR TO SITE GRADING.
3. THE CONTRACTOR 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 CONTRACTOR 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 CONTRACTOR SHALL REMOVE ALL SOILS AND SEDIMENT TRACKED ONTO EXISTING STREETS AND PAVED AREAS AND SHALL SWEEP ADJACENT STREETS DAILY, AS REQUIRED, AND PRIOR TO ANY STORM.
10. IF BLOWING DUST BECOMES A NUISANCE, THE CONTRACTOR SHALL APPLY WATER FROM A TANK TRUCK TO ALL CONSTRUCTION AREAS.
11. INLET PROTECTION IN PUBLIC STREETS SHALL BE REMOVED PRIOR TO WINTER FREEZE-UP. UPSTREAM BMPS MUST BE IN PLACE PRIOR TO INLET PROTECTION REMOVAL..
12. INLET PROTECTION DEVICES MUST HAVE EMERGENCY OVERFLOW CAPACITY WHEN USED IN PUBLIC STREETS.
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14. SHOP DRAWINGS AND ALL MATERIALS SHALL BE APPROVED BY THE SITE DESIGN ENGINEER PRIOR TO ANY REQUEST FOR APPROVAL FROM THE CITY ENGINEER.
15. UNDERGROUND STORMWATER SYSTEM SHALL BE AS-BUILT BY A LICENSED PROFESSIONAL ENGINEER.
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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 7 DAYS OR MORE OR AS REQUIRED BY NPDES AND/OR CITY OF BLOOMINGTON GRADING PERMIT.

SWPPP UPDATES AND AMENDMENTS

THE GC 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.

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RUNOFF WILL DISCHARGE INTO THE CITY SEWER THEN TO LONG MEADOW LAKE AND ULTIMATELY THE MINNESOTA RIVER APPROXIMATELY 2 MILES FROM THE SITE. THE MINNESOTA RIVER IS CONSIDERED IMPAIRED AT THIS LOCATION.

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PROPOSED IMPERVIOUS AREA	6.75 AC
PROPOSED PERVIOUS AREA	3.77 AC

ESTIMATED PHASE 1 BMP QUANTITIES

SILT FENCE	1129	LF
SAFETY FENCE	2650	LF
CONSTRUCTION ENTRANCE	2	EA
INLET PROTECTION	37	EA
DIVERSION DITCH	1190	LF
CHECK DAMS	2	EA
SEDIMENT TRAP	2	EA

KEYNOTE LEGEND

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- (D) INLET PROTECTION
- (E) ROCK CONSTRUCTION ENTRANCE/EXIT
- (F) TEMPORARY CHECK DAM
- (G) TEMPORARY DIVERSION DITCH
- (H) SEDIMENT TRAP WITH RIP-RAP TO INLET STRUCTURE

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80
SCALE: 1" = 40'

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

SIGNED: ______________________________ DATE: 01/15/2020
LAURA CLARENS
MnDOT DESIGN OF SWPPP CERTIFIED
EXPIRES MAY 31, 2022

KIMLEY-HORN AND ASSOCIATES, INC.
LAURA CLARENS
767 EUSTIS STREET, SUITE 100
ST. PAUL, MN 55114
(763) 251-1013

CLOW BERG

Kimley-Horn
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PL202100026 Pre-App

revisions
no. date description

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DATE: ______ MN LIC. NO. 45790

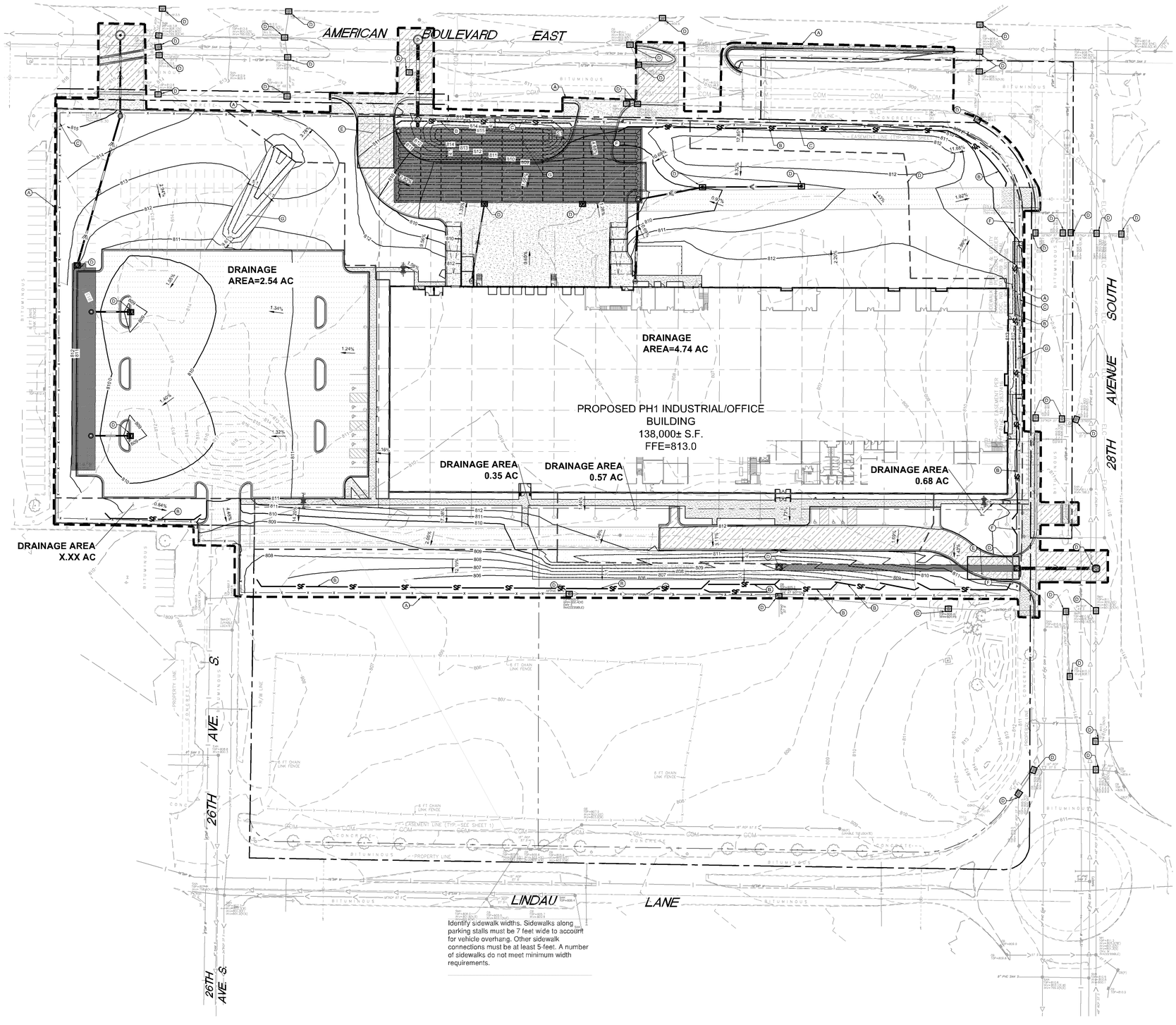
phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

PRELIMINARY - NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN - PHASE 1

C300



LEGEND

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED CLASS V AGGREGATE BASE FIRE ACCESS ROUTE
- EROSION CONTROL BLANKET
- ROCK ENTRANCE
- INLET PROTECTION
- SF — SILT FENCE
- LIMITS OF DISTURBANCE
- APPROXIMATE GRADE BREAK
- x——x — SAFETY FENCE
- BIO ROLL

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- (C) SAFETY FENCE - OFFSET FROM LIMITS OF DISTURBANCE FOR CLARITY
- (D) INLET PROTECTION
- (E) ROCK CONSTRUCTION ENTRANCE / EXIT
- (F) BIOROLL
- (G) EROSION CONTROL BLANKET

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SIGNED: _____ DATE: 01/15/2020
LAURA CLARENS
MnDOT DESIGN OF SWPPP CERTIFIED
EXPIRES MAY 31, 2022

KIMLEY-HORN AND ASSOCIATES, INC.
LAURA CLARENS
767 EUSTIS STREET, SUITE 100
ST. PAUL, MN 55114
(763) 251-1013

ESTIMATED PHASE 2 BMP QUANTITIES

SILT FENCE	1746	LF
SAFETY FENCE	2650	LF
CONSTRUCTION ENTRANCE	2	EA
INLET PROTECTION PH2	52	EA
BIOROLL	135	LF
EROSION CONTROL BLANKET	16574	SF

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80
SCALE: 1" = 40'

CLOW BERG
9800 River Road East Suite 350 Hopkins, Minnesota 55343 612-345-3500

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phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

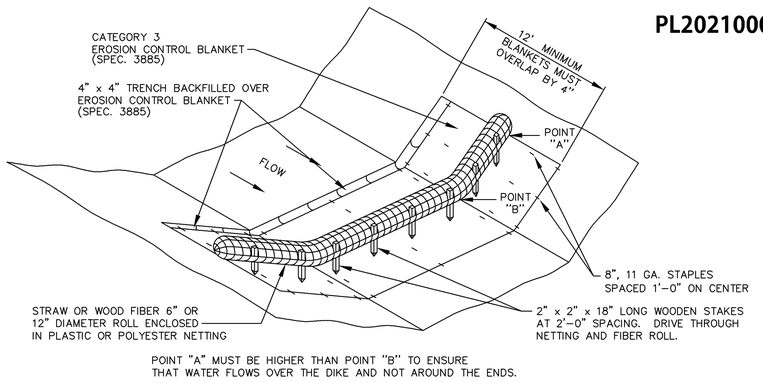
SICK - CAMPUS USA PHASE 1

sheet title
EROSION AND SEDIMENT CONTROL PLAN - PHASE 2

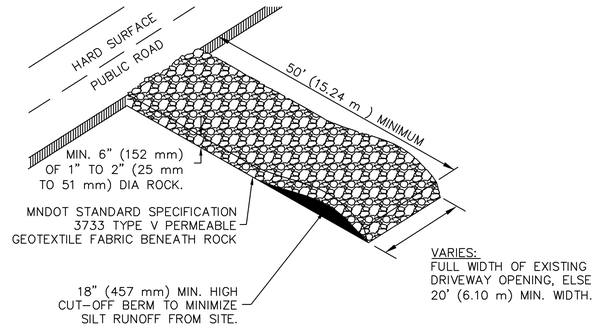
sheet number
C301

PRELIMINARY - NOT FOR CONSTRUCTION

PL202100026 Pre-App

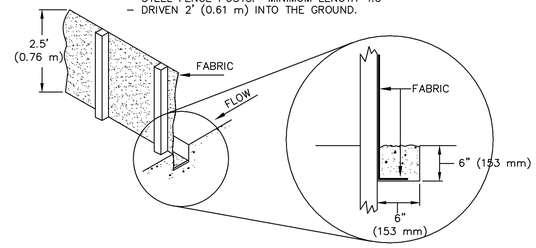


BIOROLL BLANKET SYSTEM (TYPE 3 SPEC. 3889)
BIOROLL.dwg 4/2009

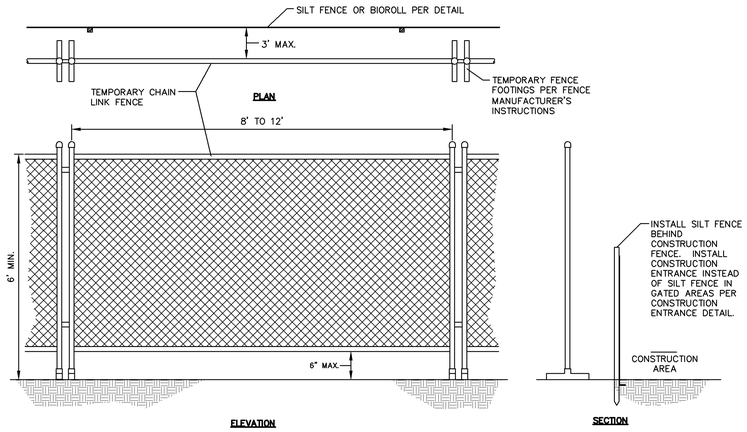


ROCK CONSTRUCTION ENTRANCE AT ACCESS ROADS
ROCK-ENTR.dwg 4/2009

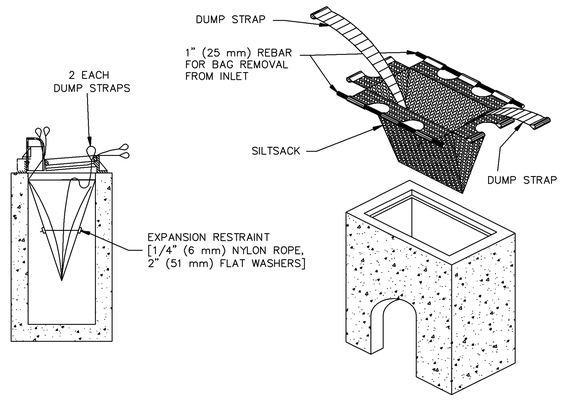
NOTES:
- PLACE BOTTOM EDGE OF FENCE INTO 6" (153 mm) DEEP TRENCH AND BACKFILLED IMMEDIATELY.
- POSTS SHALL BE:
  - 4' (1.22 m) ON CENTER
  - 2" (50.8 mm) X 2" (50.8 mm) HARDWOOD, PINE OR STEEL FENCE POSTS. MINIMUM LENGTH 4.5'
  - DRIVEN 2' (0.61 m) INTO THE GROUND.



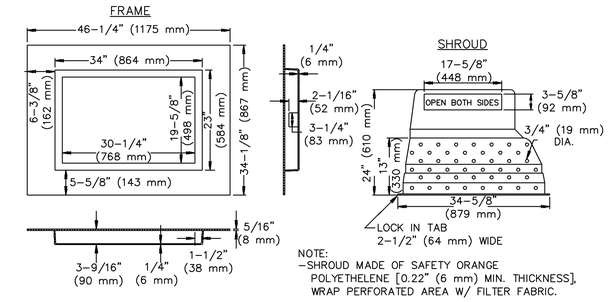
EROSION CONTROL FENCE
SILT_FEN_STD.dwg 4/2009



SAFETY FENCE

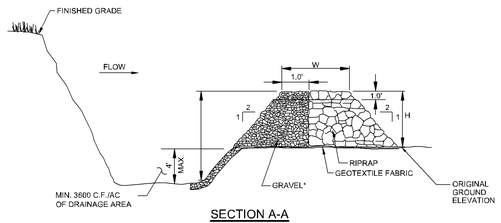


INLET PROTECTION, SEDIMENT FILTER SACK
SILT_SACK_2x3 4/2009



NOTE:
-SHROUD MADE OF SAFETY ORANGE POLYETHELENE [0.22" (6 mm) MIN. THICKNESS], WRAP PERFORATED AREA W/ FILTER FABRIC.

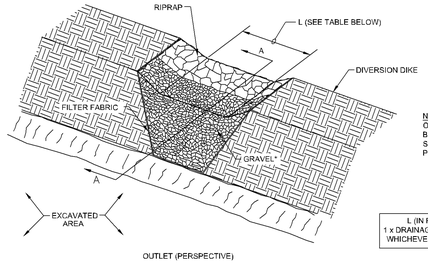
INLET PROTECTION, PERFORATED EROSION BARRIER SHROUD W/ 2' x 3' (0.61 x 0.91 m) FRAME
INLET_SHROUD_2x3.dwg 4/2009



SECTION A-A

* GRAVEL SHALL BE 2"-3" CLEAN STONE

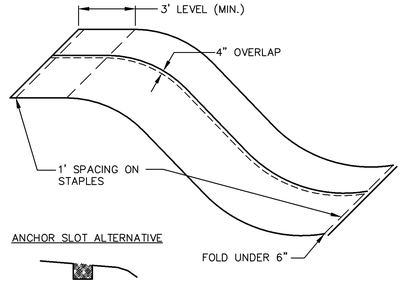
OUTLET DIM (FT).	
	ALL SEDIMENT TRAPS
L	6'
H	2'
W	2'



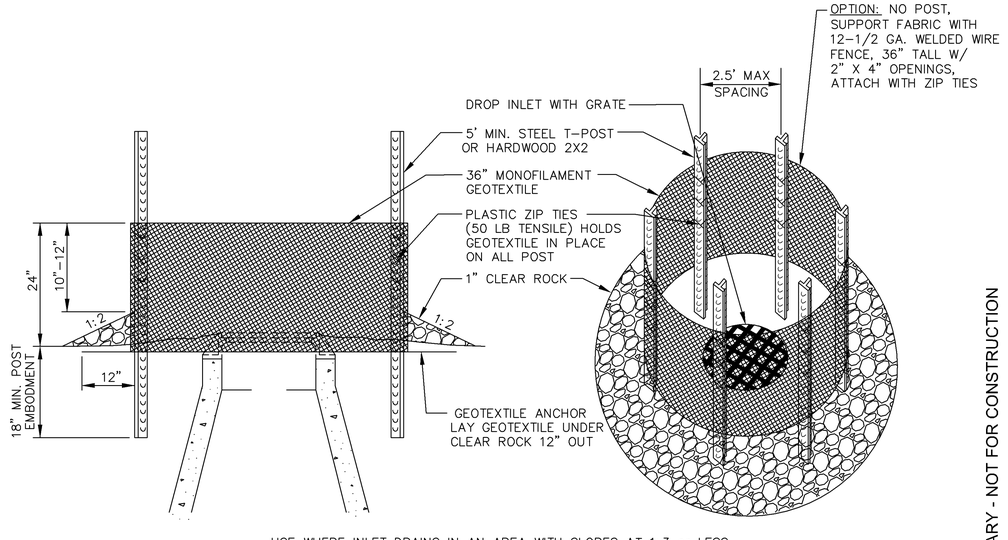
NOTE:
OUTLET DIMENSIONS PROVIDED BELOW AND VOLUME FOR EACH SEDIMENT TRAP LOCATED ON THE PLANS. (SEE SITE MAPS)

L (IN FEET) = 6' OR
1 x DRAINAGE AREA (AC)
WHICHEVER IS LARGER

TEMPORARY SEDIMENT TRAP



EROSION CONTROL BLANKET



USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 or LESS

INLET PROTECTION
SILT FENCE RING AND ROCK FILTER BERM
INLET_PROTECTION_RING.dwg 4/2009

PRELIMINARY - NOT FOR CONSTRUCTION

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9800 River Road East Suite 200 Hopkins, Minnesota 55343 612-345-3500

Kimley»Horn
2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

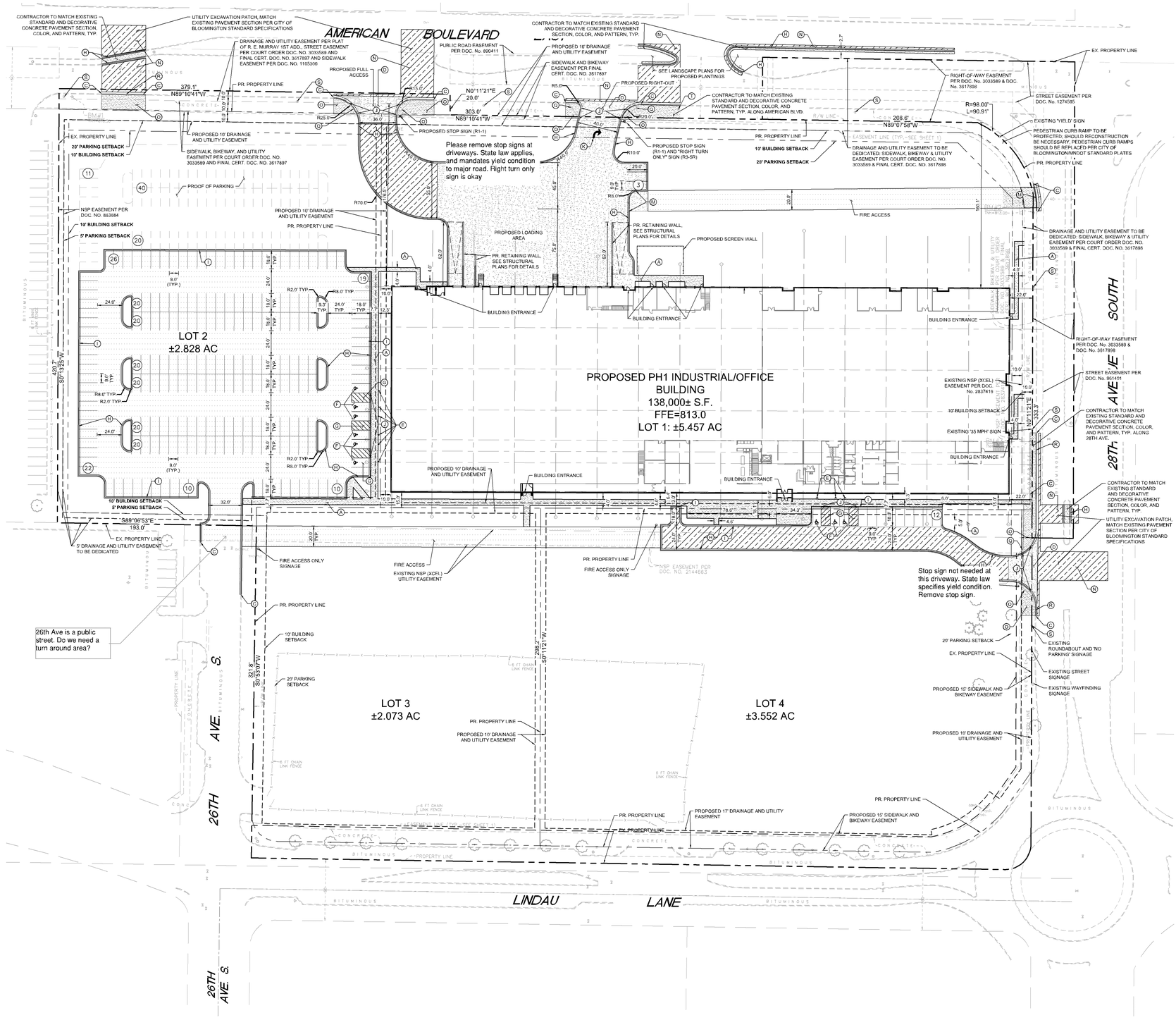
revisions		
no.	date	description

phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

sheet title
EROSION AND SEDIMENT
CONTROL DETAILS

sheet number
C302



LEGEND

- PROPERTY LINE
- PROPOSED FENCE
- SETBACK LINE
- PROPOSED CURB AND GUTTER
- REPLACE AND MATCH EXISTING ASPHALT PAVEMENT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED HEAVY DUTY ASPHALT

PROPERTY SUMMARY	
SICK Technology Campus - 2020	
TOTAL LOT 1 PROPERTY AREA	5.457 AC
TOTAL LOT 2 PROPERTY AREA	2.828 AC
TOTAL LOT 3 PROPERTY AREA	2.073 AC
TOTAL LOT 4 PROPERTY AREA	3.552 AC
TOTAL PROPERTY	13.910 AC
PROPOSED IMPERVIOUS AREA	6.75 AC
PROPOSED PERVIOUS AREA	3.77 AC
TOTAL DISTURBED AREA	10.52 AC
ZONING SUMMARY	
EXISTING ZONING	LINDAU MIXED USE (LX)
PROPOSED ZONING	LINDAU MIXED USE (LX)
PARKING SETBACKS	SIDE/REAR = 5' ROAD = 20'
BUILDING SETBACKS	FRONT = 10' SIDE = 10' REAR = 10'

BUILDING DATA SUMMARY	
AREAS	
PROPOSED PROPERTY	13.91 AC
BUILDING AREA	138,000 SF (22.8% OF TOTAL PROPERTY AREA)
PHASE I PARKING	
REQUIRED PARKING	221 STALLS
REQUIRED PARKING W/ 10% TRANSIT REDUCTION	199 STALLS
PROPOSED PARKING	219 STALLS
PROOF OF PARKING	85 STALLS
ADA STALLS REQ'D / PROVIDED	7 STALLS / 9 STALLS

SITE PLAN NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
3. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED. REFER TO LANDSCAPE PLAN FOR EXACT SODDING AND SEEDING LIMITS AND SPECIFICATIONS.
4. ALL INNER CURBED RADII ARE TO BE 4.7' AND OUTER CURBED RADII ARE TO BE 10' UNLESS OTHERWISE NOTED. STRIPED RADII ARE TO BE 5'. ALL CURB AND GUTTER IS TYPE B612 UNLESS OTHERWISE NOTED.
5. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
6. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
7. 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.
8. SITE BOUNDARY, UTILITY AND ROAD INFORMATION TAKEN FROM A SURVEY BY SUNDE LAND SURVEYING.
9. REFER TO ELECTRICAL PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
10. CONTRACTOR IS REQUIRED TO ENSURE ALL SIDEWALKS MEET ADA STANDARDS.
11. RESTORE CITY STREET BY COMPLYING WITH THE BLOOMINGTON CITY STREET IMPROVEMENT POLICY.
12. ALL PARKING STALL STRIPING MUST BE PAINTED WHITE.
13. STREET LIGHTING AND INTERCONNECT CONDUIT MUST BE EXPOSED FOR CITY INSPECTION PRIOR TO POURING CONCRETE OR BACKFILLING EXCAVATION IN CITY RIGHT-OF-WAY.
14. ALL PARKING STALL STRIPING MUST BE PAINTED WHITE. PARKING ISLANDS MUST BE 3-FEET SHORTER THAN THE PARKING STALL AND 8-FEET WIDE.

KEYNOTE LEGEND

A	CONCRETE SIDEWALK
B	PROPOSED PIPE BOLLARD
C	MATCH EXISTING EDGE OF PAVEMENT/ CURB & GUTTER
D	COMMERCIAL DRIVEWAY APRON PER CITY OF BLOOMINGTON DETAIL
E	ACCESSIBLE PARKING SIGN PER STATE OF MINNESOTA ADA GUIDELINES
F	ACCESSIBLE PARKING STALL AND ACCESS AISLE PER STATE OF MINNESOTA ADA GUIDELINES
G	AREA STRIPED WITH 4" SYSL @ 45° 2' O.C.
H	B612 CURB & GUTTER (TYP.)
I	TIP-OUT CURB
J	FLUSH CURB AND GUTTER
K	PAVEMENT LEGEND, SEE DETAIL
L	LANDSCAPE AREA - SEE LANDSCAPE PLANS
M	MOUNTABLE CURB AND GUTTER
N	BITUMINOUS PAVEMENT REPLACEMENT
O	CONCRETE SIDEWALK REPLACEMENT, PAVEMENT SECTION TO MATCH EXISTING EXTENTS OF CONCRETE AND EXISTING EXTENTS OF COLORED STAMPED CONCRETE
P	PAVEMENT MARKINGS IN ACCORDANCE WITH MMUTCD
Q	CLEAR VIEW TRIANGLE 15' FROM PROPERTY LINE AND DRIVEWAY APPROACHES
R	B624 CURB & GUTTER
S	EXISTING STREET LIGHTING
T	NOT USED
U	REPLACE SALVAGED STREET LIGHTING; COORD. WITH CITY OF BLOOMINGTON

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80
SCALE: 1" = 40'

PRELIMINARY - NOT FOR CONSTRUCTION

CLOW BERG
9800 River Road East Suite 350 Hopkins, Minnesota 55343 612-345-3500

Kimley»Horn
2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

PL202100026 Pre-App

revisions
no. date description

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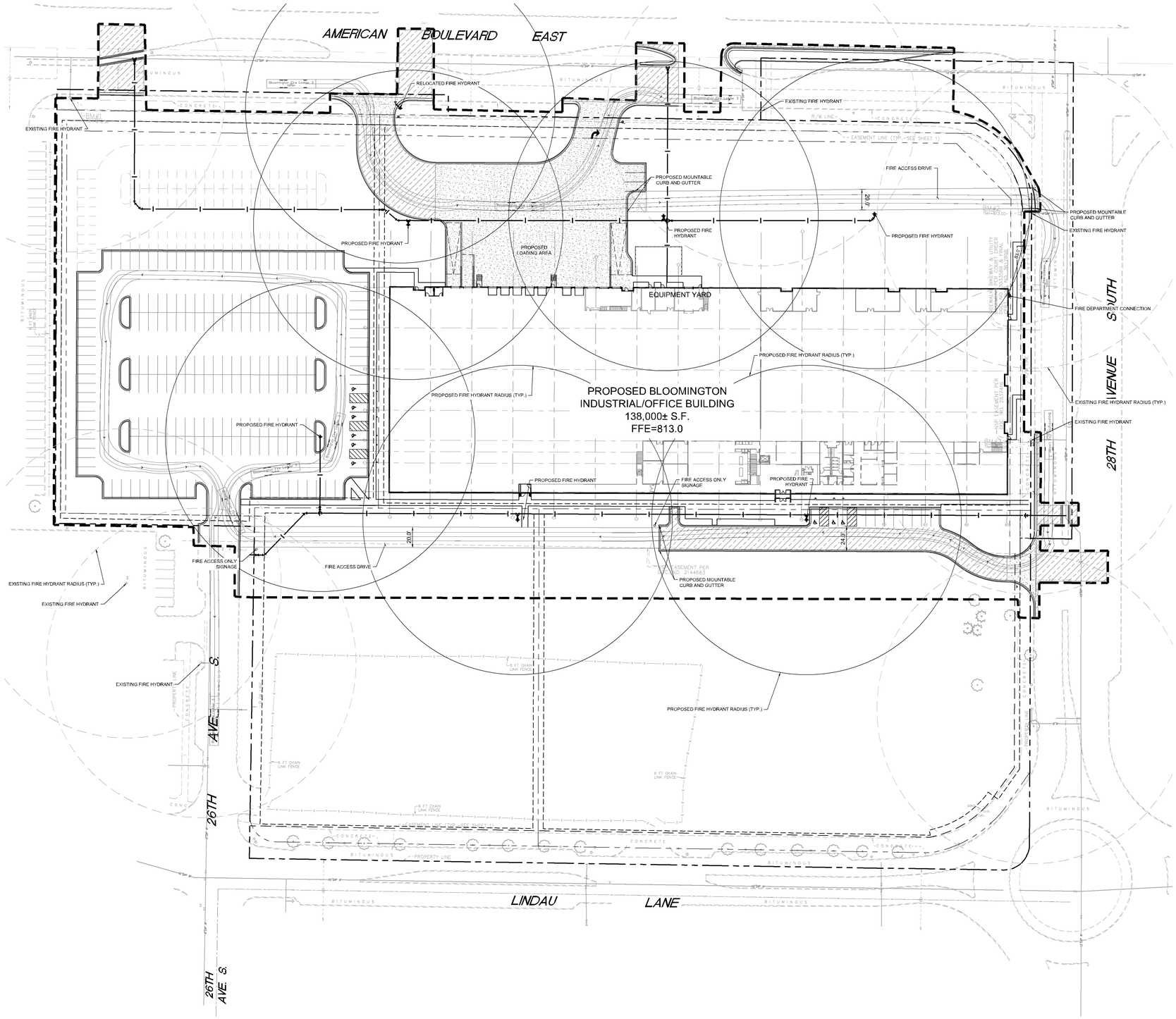
WILLIAM D. MATZEK, P.E.
DATE: _____ MN LIC. NO. 45790

phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

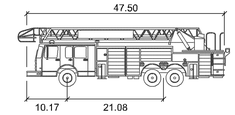
sheet title
SITE PLAN

sheet number
C400



LEGEND

- PROPERTY LINE
- PROPOSED REDUCER
- PROPOSED TEE
- PROPOSED GATE VALVE
- PROPOSED HYDRANT
- PROPOSED WATERMAIN
- EXISTING FIRE HYDRANT 150' RADIUS COVERAGE
- PROPOSED FIRE HYDRANT 150' RADIUS COVERAGE
- PROPOSED ASPHALT
- BLOOMINGTON FIRE TRUCK - LADDER 3



Bloomington Fire Ladder 3

	feet
Width	: 8.33
Track	: 8.33
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

THE VEHICLE MANEUVERING IDENTIFIED ON THIS PLAN WAS PREPARED USING AUTOTURN SOFTWARE AND DOES NOT NECESSARILY REPRESENT ACTUAL CONDITIONS NOR DOES IT ACCOUNT FOR EXTERNAL FACTORS. THIS ANALYSIS SHOULD NOT BE USED AS THE SOLE BASIS FOR THE CLIENT'S DECISION MAKING.

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80
SCALE: 1" = 40'

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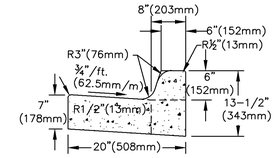
project name	

SICK - CAMPUS USA
PHASE 1

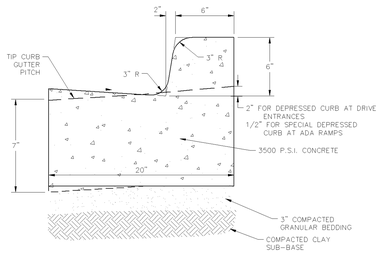
sheet title
FIRE DEPARTMENT ACCESS PLAN

sheet number
C401

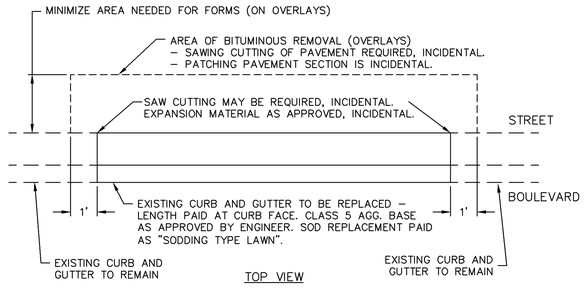
PL202100026 Pre-App



B612 STANDARD CURB & GUTTER
B612_C&G.dwg 4/2009



B612 TIP CURB
N.T.S.



TOP VIEW

C&G REMOVAL AND REPLACEMENT
C&G_REM_REPLACE.dwg 4/2009

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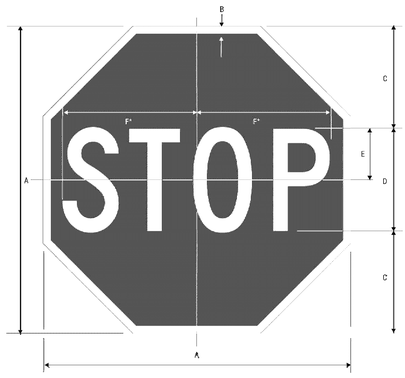
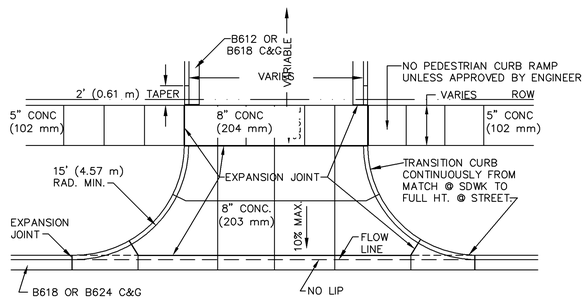
WWW.KIMLEY-HORN.COM



R1-1
STOP
*Reduce spacing 40%

	A	B	C	D	E	F
	18	.375	6	6 C	3	7.75
	24	.526	8	8 C	4	10
C	30	.75	10	10 C	5	12.5
	36	.875	12	12 C	6	15
	48	1.25	16	16 C	8	20

COLORS: LEGEND – WHITE (RETROREFLECTIVE)
BACKGROUND – RED (RETROREFLECTIVE)



NONRESIDENTIAL DRIVEWAY APPROACH WITH BOULEVARD SIDEWALK
DRWY_COM.dwg 4/2009

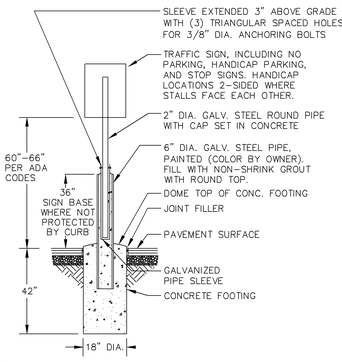
SIGN R7-8A

SIGN R7-8A

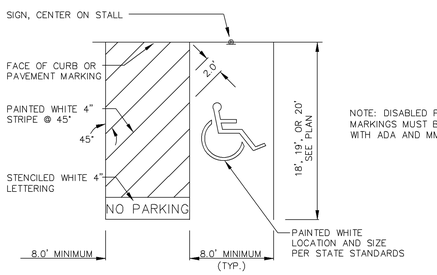
COLORS:
LEGEND AND BORDER – WHITE
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND – BLUE

REDUCE SPACING 50%
SEE APPENDIX "E" FOR SYMBOL PROPORTIONS

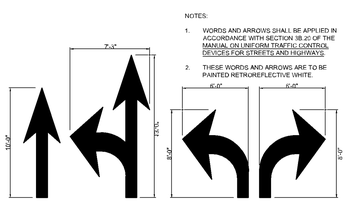
NOTE: DISABLED PARKING SIGNAGE MUST BE PLACED IN ACCORDANCE WITH ADA AND MMUTCD.



HANDICAP SIGN WITH BOLLARD



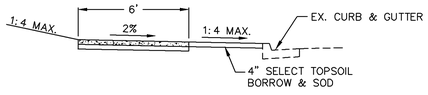
HANDICAP PARKING STALL LAYOUT



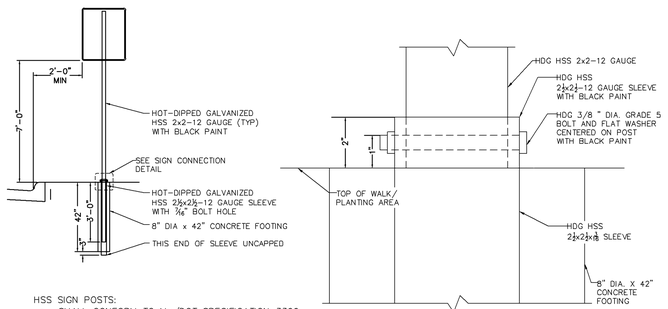
SOLID ARROW MARKINGS
USED AT EXITS FROM THE PARKING LOT TO PUBLIC STREETS

PAVEMENT MARKINGS
N.T.S.

NOTE: DISABLED PARKING PAVEMENT MARKINGS MUST BE PLACED IN ACCORDANCE WITH ADA AND MMUTCD



TYPICAL SIDEWALK INSTALLATION
TYP_CONC_WALK.dwg 11/2012

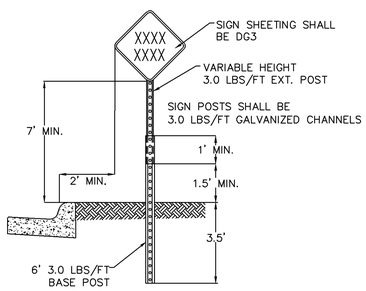


SIGN CONNECTION DETAIL
N.T.S.

HSS SIGN POSTS:
- SHALL CONFORM TO Mn/DOT SPECIFICATION 3306.
- SIGN POSTS AND SLEEVES SHALL BE HOT–DIPPED GALVANIZED.
- USE ASTM A500, GRADE B STRUCTURAL STEEL TUBING (HSS) IN THE RAIL CONFORMING TO SPEC. 3361. FINIAL CAPS SHALL BE SPEC. 3322. ALL OTHER STEEL SHALL CONFORM TO SPEC. 3306.
- GALVANIZE BOLTS, NUTS, WASHERS AND ANCHORS PER SPEC. 3392. GALVANIZE ALL OTHER STRUCTURAL STEEL PER SPEC. 3394, AFTER FABRICATIONS.
- ADD WASHERS, SHIMS, OR OTHER SUPPORT TO PREVENT MOVEMENT OF SIGN POST WITHIN SLEEVE.

TYPICAL MOUNTING INSTALLATION
NTS

2"x2" SQUARE POST–MOUNTED SIGN



NOTE:
ALL TRAFFIC CONTROL DEVICES, INSTALLATION AND SIGNING SHALL CONFORM TO THE LATEST VERSION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).

GROUND POST–MOUNTED SIGN TYPICAL INSTALLATION
Sign_Ground_Mount.dwg 10/2012

revisions
No. date description

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project number	160687009
project name	

SICK - CAMPUS USA PHASE 1

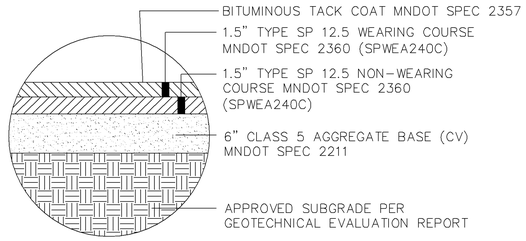
February 27 2020
160687009
SICK Technology Campus - 2020
PREPARED FOR
SICK

sheet title
SITE DETAILS

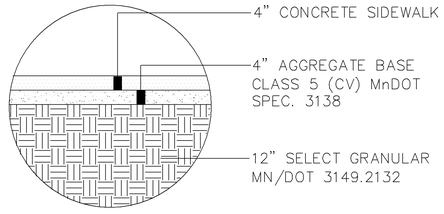
Sheet Number C402
Current Revision

PRELIMINARY - NOT FOR CONSTRUCTION

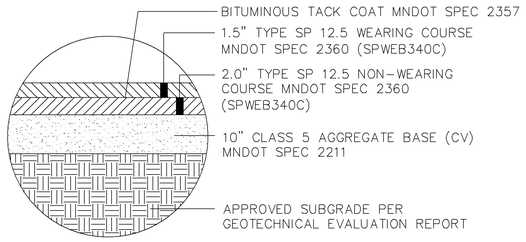
PL202100026 Pre-App



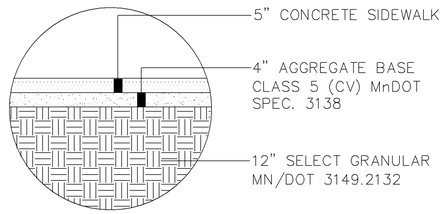
STANDARD DUTY BITUMINOUS PAVEMENT



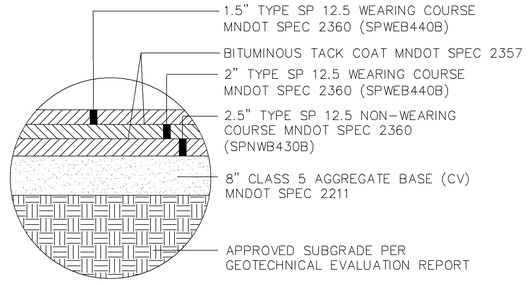
CONCRETE SIDEWALK
LIGHT DUTY



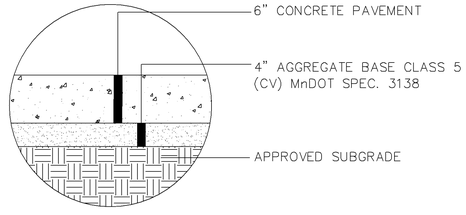
HEAVY DUTY BITUMINOUS PAVEMENT



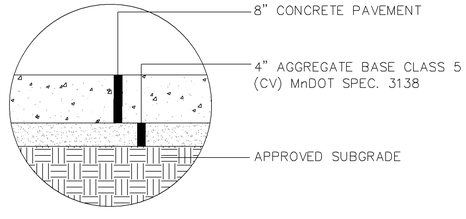
CONCRETE SIDEWALK
W/IN PUBLIC ROW



BITUMINOUS PATCH



HEAVY DUTY CONCRETE PAVEMENT



TRUCK DOCK PAD CONCRETE PAVEMENT

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9800 River Road East Suite 200 Hopkins, Minnesota 55343 . 612-345-3500

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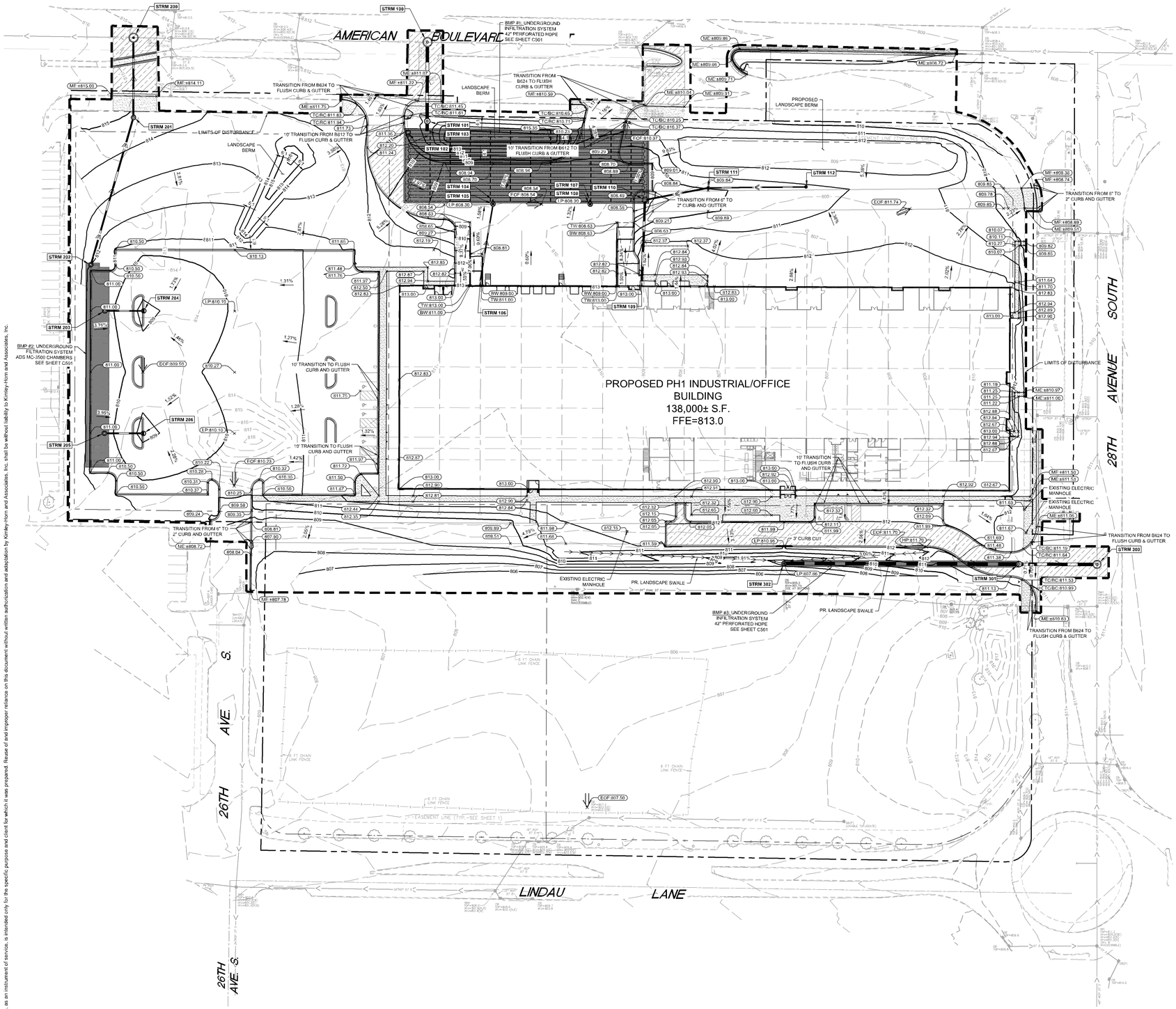
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

sheet title
SITE DETAILS

sheet number
C403

PRELIMINARY - NOT FOR CONSTRUCTION



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
- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- EXISTING STORM MANHOLE / STORM CATCHBASIN / SANITARY MANHOLE
- EXISTING STORM CATCHBASIN (ON CURB)
- PROPOSED SPOT ELEVATION
- PROPOSED HIGH POINT ELEVATION
- PROPOSED LOW POINT ELEVATION
- PROPOSED GUTTER ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- PROPOSED FLUSH PAVEMENT ELEVATION
- MATCH EXISTING ELEVATION
- PROPOSED EMERGENCY OVERFLOW
- PROPOSED DRAINAGE DIRECTION
- PROPOSED ADA SLOPE
- RETAINING WALL
- PROPOSED CURB AND GUTTER
- PROPOSED LANDSCAPE SWALE

GRADING PLAN NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BLOOMINGTON, 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: 6" - 10" PER AASHTO M-252
   HDPE: 12" OR GREATER PER ASTM F-2306
   PVC SCH. 40 PER ASTM D-3034
   STORM SEWER FITTINGS SHALL BE AS FOLLOWS:
   RCP PER ASTM C-76, JOINTS PER ASTM C-361, C-990, AND C-443
   HDPE PER ASTM 3212
   PVC PER ASTM D-3034, JOINTS PER ASTM D-3212
4. 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.
5. 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.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL.
7. CONTRACTOR SHALL EXCAVATE DRAINAGE TRENCHES TO FOLLOW PROPOSED STORM SEWER ALIGNMENTS.
8. GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL ROUGH GRADE TO SUBGRADE ELEVATION AND LEAVE STREET READY FOR SUBBASE.
9. 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.
10. REFER TO THE UTILITY PLAN FOR SANITARY SEWER MAIN, WATER MAIN SERVICE LAYOUT AND ELEVATIONS AND CASTING / STRUCTURE SCHEDULE.
11. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF PAVEMENTS AND CURB AND GUTTER WITH SMOOTH UNIFORM SLOPES WITH PROVIDE POSITIVE DRAINAGE.
12. INSTALL A MINIMUM OF 4" CLASS 5 AGGREGATE BASE UNDER CURB AND GUTTER.
13. 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.
14. ALL SPOT ELEVATIONS/CONTOURS ARE TO FINISHED GRADE UNLESS OTHERWISE NOTED.
15. ALL SPOT ELEVATIONS ARE TO FLOW LINE UNLESS OTHERWISE NOTED.
16. GRADING FOR ALL SIDEWALKS AND ACCESSIBLE ROUTES INCLUDING CROSSING DRIVEWAYS SHALL CONFORM TO CURRENT ADA STATE/NATIONAL STANDARDS. SLOPES SHALL NOT EXCEED 5% LONGITUDINALLY OR EXCEED 2% CROSS SLOPE. SIDEWALK ACCESS TO EXTERNAL BUILDING DOORS SHALL BE ADA COMPLIANT. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ADA CRITERIA CANNOT BE MET IN ANY LOCATION.
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. HDPE PIPE CONNECTIONS INTO ALL CONCRETE STRUCTURES MUST BE MADE WITH WATER TIGHT MATERIALS UTILIZING A-LOK OR WATERSTOP GASKET OR BOOT. CAST-IN-PLACE RUBBER BOOT, OR APPROVED EQUAL. WHERE THE ALIGNMENT PRECLUDES THE USE OF THE ABOVE APPROVED WATERTIGHT METHODS, CONSEAL 231 WATERSTOP SEALANT OR APPROVED EQUAL WILL ONLY BE ALLOWED AS APPROVED BY THE ENGINEER.

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80
SCALE: 1" = 40'

PRELIMINARY - NOT FOR CONSTRUCTION

CLOW BERG
9600 Bren Road East Suite 200 Hopkins, Minnesota 55343 952-345-3500

Kimley»Horn
2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

PL202100026 Pre-App

revisions
no. date description

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.

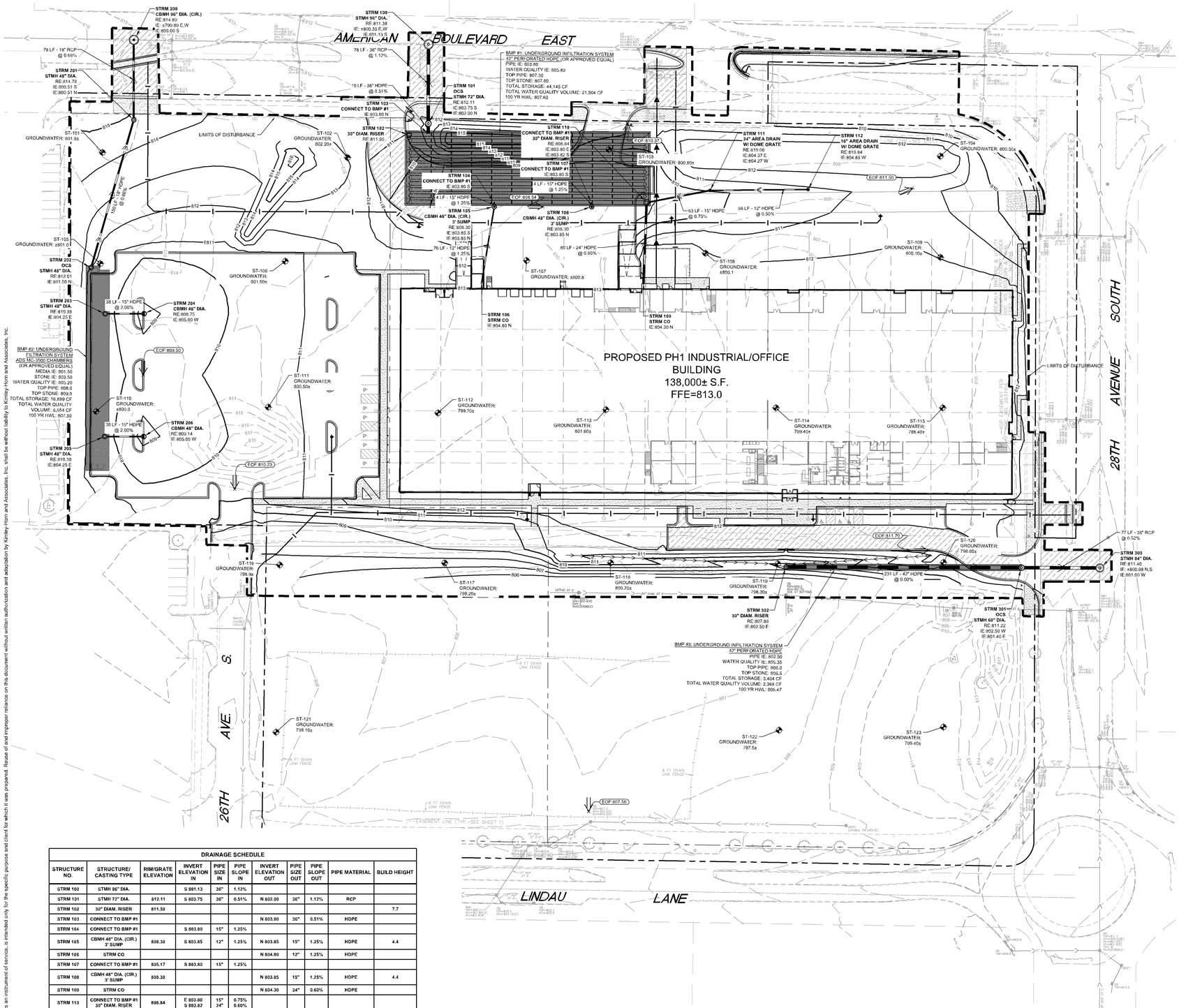
WILLIAM D. MATZEK, P.E.
DATE: _____ MN LIC. NO. 45790

phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

sheet title
GRADING PLAN

sheet number
C500



DRAINAGE SCHEDULE

STRUCTURE NO.	STRUCTURE/ CASTING TYPE	RIM/GRATE ELEVATION	INVERT ELEVATION IN	PIPE SIZE IN	PIPE SLOPE IN	INVERT ELEVATION OUT	PIPE SIZE OUT	PIPE SLOPE OUT	PIPE MATERIAL	BUILD HEIGHT
STRM 100	STMH 96" DIA.		S 801.13	36"	1.12%					
STRM 101	STMH 72" DIA.	812.11	S 803.75	36"	0.51%	N 802.00	36"	1.12%	RCP	
STRM 102	30" DIAM. RISER	811.50								7.7
STRM 103	CONNECT TO BMP #1					N 803.80	36"	0.51%	HDPE	
STRM 104	CONNECT TO BMP #1		S 803.80	15"	1.25%					
STRM 105	CBMH 48" DIA. (CIR.) 3' SUMP	808.30	S 803.85	12"	1.25%	N 803.85	15"	1.25%	HDPE	4.4
STRM 106	STRM CO					N 804.80	12"	1.25%	HDPE	
STRM 107	CONNECT TO BMP #1	805.17	S 803.80	15"	1.25%					
STRM 108	CBMH 48" DIA. (CIR.) 3' SUMP	808.30				N 803.85	15"	1.25%	HDPE	4.4
STRM 109	STRM CO					N 804.30	24"	0.60%	HDPE	
STRM 110	CONNECT TO BMP #1 30" DIAM. RISER	808.84	E 803.80 S 803.82	15" 24"	0.75% 0.60%					
STRM 111	24" AREA DRAIN W/ DOME GRATE	810.08	E 804.37	12"	0.50%	W 804.27	15"	0.75%	HDPE	5.8
STRM 112	18" AREA DRAIN W/ DOME GRATE	810.84				W 804.85	12"	0.50%	HDPE	6.0
STRM 200	CBMH 96" DIA. (CIR.)		S 800.00	18"	0.66%					
STRM 201	STMH 48" DIA.	814.78	S 800.51	18"	0.66%	N 800.51	18"	0.66%	RCP	14.3
STRM 202	OCS STMH 48" DIA.	812.01				N 801.50	18"	0.66%	HDPE	10.5
STRM 203	STMH 48" DIA.	810.39	E 804.25	15"	2.00%					6.1
STRM 204	CBMH 48" DIA.	808.75				W 805.90	15"	2.00%	HDPE	3.8
STRM 205	STMH 48" DIA.	810.39	E 804.25	15"	2.00%					6.1
STRM 206	CBMH 48" DIA.	809.14				W 805.90	15"	2.00%	HDPE	4.1
STRM 300	STMH 84" DIA.		W 801.00	36"	0.52%					
STRM 301	OCS STMH 60" DIA.	811.22	W 802.50	42"	0.00%	E 801.40	36"	0.52%	RCP	9.8
STRM 302	30" DIAM. RISER	807.86				E 802.50	42"	0.00%	HDPE	5.4

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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
- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- EXISTING STORM MANHOLE / STORM CATCHBASIN / SANITARY MANHOLE
- EXISTING STORM CATCHBASIN (ON CURB)
- 0.0% PROPOSED DRAINAGE DIRECTION
- 0.00% PROPOSED ADA SLOPE
- RETAINING WALL
- PROPOSED CURB AND GUTTER
- PROPOSED LANDSCAPE SWALE

STORMWATER MANAGEMENT PLAN NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BLOOMINGTON, 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-3034
   DIP: 6" - 12" CLASS 54 PER ANSI/AWWA SPECIFICATION A-21.51/C151
   DIP: 12" OR GREATER CLASS 53 PER ANSI/AWWA SPECIFICATION A-21.51/C151
   DIP MECHANICAL JOINT PIPE TO COMPLY WITH ANSI/AWWA SPECIFICATION A-21.11/C111
   STORM SEWER FITTINGS SHALL BE AS FOLLOWS:
   RCP PER ASTM C-76, JOINTS PER ASTM C-361, C-990, AND C-443
   HDPE PER ASTM 3212
   PVC PER ASTM D-3034, JOINTS PER ASTM D-3212
   DIP FITTINGS SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS. FITTINGS OVER 12" IN DIAMETER SHALL BE CLASS 53.
   DIP PIPE JOINTS SHALL BE AN APPROVED SLIP OR MECHANICAL JOINT WITH RUBBER GASKETS.
4. 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.
5. 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.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL.
7. CONTRACTOR SHALL EXCAVATE DRAINAGE TRENCHES TO FOLLOW PROPOSED STORM SEWER ALIGNMENTS.
8. 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.
9. REFER TO THE UTILITY PLAN FOR SANITARY SEWER MAIN, WATER MAIN SERVICE LAYOUT AND ELEVATIONS AND CASTING / STRUCTURE SCHEDULE.
10. 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.
11. 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.
12. ROOF DRAIN INVERT CONNECTIONS AT THE BUILDING SHALL BE AS SHOWN ON PLAN UNLESS OTHERWISE NOTED. REFERENCE MEP PLANS FOR ROOF DRAIN CONNECTION.
13. ALL STORM SEWER CONNECTIONS SHALL BE GASKETED AND WATER TIGHT INCLUDING MANHOLE CONNECTIONS.
15. ALL STORM SEWER PIPE SHALL BE AIR TESTED IN ACCORDANCE WITH THE CURRENT PLUMBING CODE.
14. HDPE PIPE CONNECTIONS INTO ALL CONCRETE STRUCTURES MUST BE MADE WITH WATER TIGHT MATERIALS UTILIZING A-LOK OR WATERSTOP GASKET OR BOOT, CAST-IN-PLACE RUBBER BOOT, OR APPROVED EQUAL. WHERE THE ALIGNMENT PRECLUDES THE USE OF THE ABOVE APPROVED WATERTIGHT METHODS, CONSEAL 231 WATERSTOP SEALANT OR APPROVED EQUAL WILL ONLY BE ALLOWED AS APPROVED BY THE ENGINEER.
15. ALL STORMWATER MANAGEMENT AREAS SHALL BE KEPT OFF-LINE UNTIL DISTURBED AREAS ARE RESTORED. IF THIS IS NOT POSSIBLE, SYSTEM S MUST BE CLEANED OUT PRIOR TO CERTIFICATE OF OCCUPANCY.
16. SEE SHEET C503 FOR UNDERGROUND STORMWATER MANAGEMENT NOTES AND REQUIREMENTS.

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80
SCALE: 1" = 40'

PRELIMINARY - NOT FOR CONSTRUCTION

CLOW BERG
9600 Bren Road East, Suite 200 Hopkins, Minnesota 55343 952-345-3000

Kimley»Horn
2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
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WILLIAM D. MATZEK, P.E.
DATE: _____ MN LIC. NO. 45790

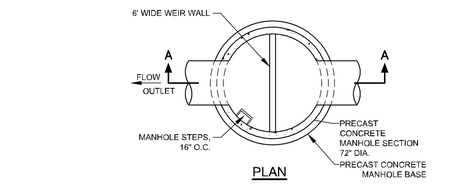
phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

sheet title
STORMWATER MANAGEMENT PLAN

sheet number
C501

PL202100026 Pre-App



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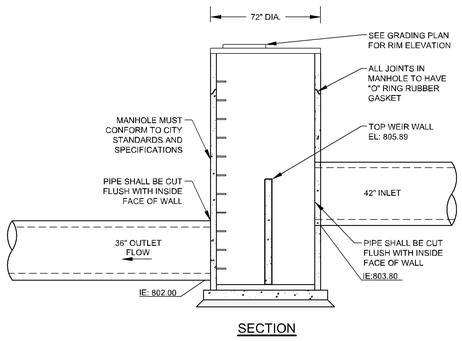
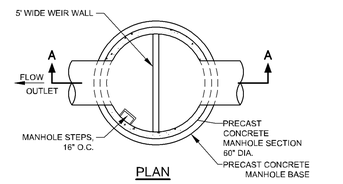


SECTION

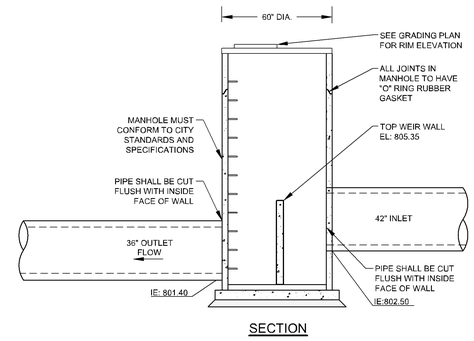
BMP#1 OUTLET CONTROL STRUCTURE (STRM 101)

UNDERGROUND STORMWATER MANAGEMENT NOTES

1. CONTRACTOR TO PROVIDE (2) DOUBLE RING INFILTROMETER TESTS WITHIN THE UNDERGROUND SYSTEM EXCAVATION PRIOR TO INSTALLATION OF THE UNDERGROUND SYSTEM. THE CONTRACTOR SHALL PROVIDE THE RESULTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION OF THE UNDERGROUND SYSTEM.
2. CONTRACTOR SHALL OVER-EXCAVATE ALL FILL AS NECESSARY TO NATIVE POORLY GRADED SANDY SOILS. EXCAVATION SHALL BE REPLACED WITH SUITABLE ENGINEERED FILL MEETING THE MNDOT SPECIFICATION FOR COARSE FILTER AGGREGATE PER SECTION 3149.2H. DEPTHS OF FILL/URBAN FILL EXPECTED TO VARY, CONTRACTOR SHALL VERIFY DEPTHS OF EXCAVATION AND PERFORM INFILTROMETER TESTS PRIOR TO INSTALLING UNDERGROUND SYSTEM.
3. IF NATIVE SUBGRADE SOILS BELOW FILL ARE DETERMINED TO NOT BE CONDUCIVE TO THE DESIGN INFILTRATION REQUIREMENTS, THE CONTRACTOR SHALL REMOVE AND REPLACE THE POORLY INFILTRATING SOILS TO A DEPTH WHERE THE EXISTING NATIVE SUBGRADE SOILS MEET OR EXCEED THE DESIGN INFILTRATION RATE AS REVIEWED BY THE ENGINEER.
4. UPON COMPLETION OF THE STORMWATER BMP AND FINAL STABILIATION OF THE TRIBUTARY DRAINAGE AREA, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION THE BMP AFTER A SIGNIFICAT RAIN EVENT THAT SHOWS THE BMPS DRAWS DOWN WITHIN 48 HOURS.
5. NO CONSTRUCTION EQUIPMENT SHALL TRAVEL WITHIN THE UNDERGROUND INFILTRATION SYSTEM AREA. USE EXCAVATOR WITH TOOTHED BUCKET FOR INFILTRATION BASIN EXCAVATION TO AVOID COMPACTING OR SMEARING OF SOILS.
6. FINAL EXCAVATION OF UNDERGROUND INFILTRATION SYSTEM AREA AND INSTALLATION OF OF ENGINEERED SOIL MUST OCCUR IN DRY SOIL CONDITIONS TO PREVENT SMEARING AND COMPACTION. DO NOT WORK IN INFILTRATION SYSTEM AREA IF SOIL CONDITIONS ARE WET.
7. IMMEDIATELY FOLLOWING SYSTEM CONSTRUCTION, THE EXCAVATION FOR THE TRENCH SHALL BE IMMEDIATELY BACKFILLED WITH APPROVED BACKFILL MATERIAL PER MANUFACTURER'S RECOMMENDATION, OR THE EXCAVATION SHALL BE PROTECTED WITH SILT FENCE AND OR BIO-ROLLS SUCH THAT ON-SITE SOILS DO NOT ENTER THE TRENCH EXCAVATION AND CLOG UP THE BOTTOM/SIDES OF THE TRENCH LIMITING THE INFILTRATION CAPACITY OF THE UNDERGROUND SYSTEM.
8. IF ANY SOILS ENTER THE TRENCH PRIOR TO BACKFILLING, THE CONTRACTOR SHALL REMOVE SOILS AND CONFIRM THE INFILTRATION CAPACITY OF THE NATIVE SUBGRADE SOILS IS MET WITH INFILTROMETER TESTS.
9. CONTRACTOR SHALL COORDINATE AND COMPLETE CERTIFIED AS-BUILT PLANS DEMONSTRATING ALL CONSTRUCTED STORMWATER CONVEYANCE STRUCTURES, AND STORMWATER MANAGEMENT FACILITIES (INCLUDING AS-BUILT VOLUMES) CONFORM TO DESIGN AND/OR PLANS AS APPROVED BY THE CITY.
10. STORMWATER MANAGEMENT AREAS TO BE KEPT OFF-LINE UNTIL DISTURBED AREAS ARE RESTORED. IF NOT POSSIBLE, SYSTEMS MUST BE CLEANED OUT PRIOR TO CERTIFICATE OF OCCUPANCY.

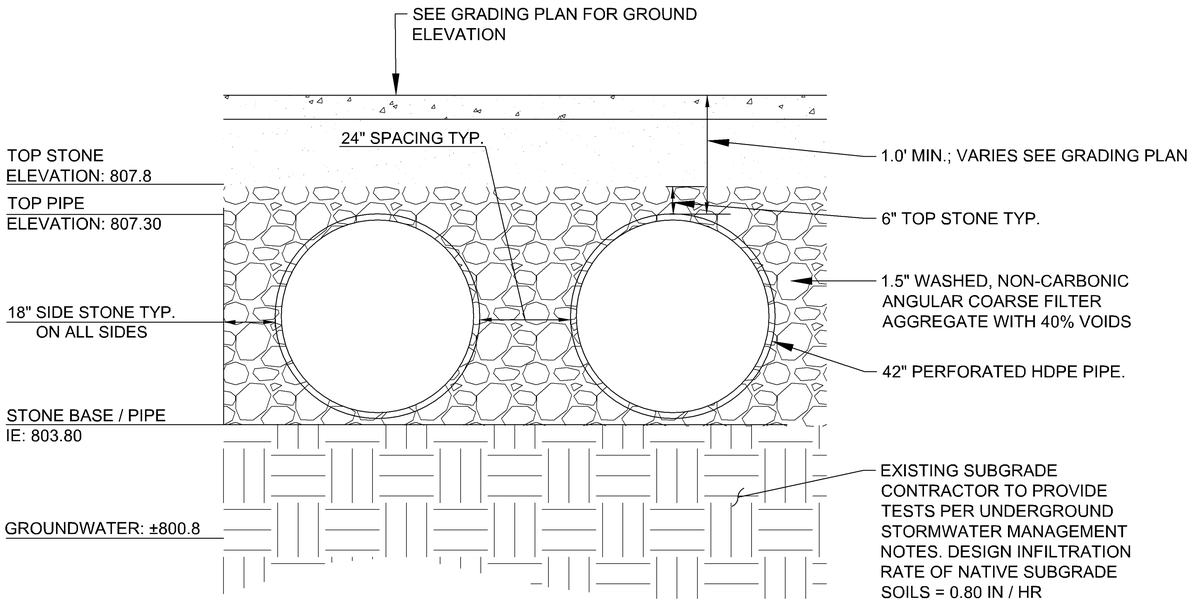


PLAN



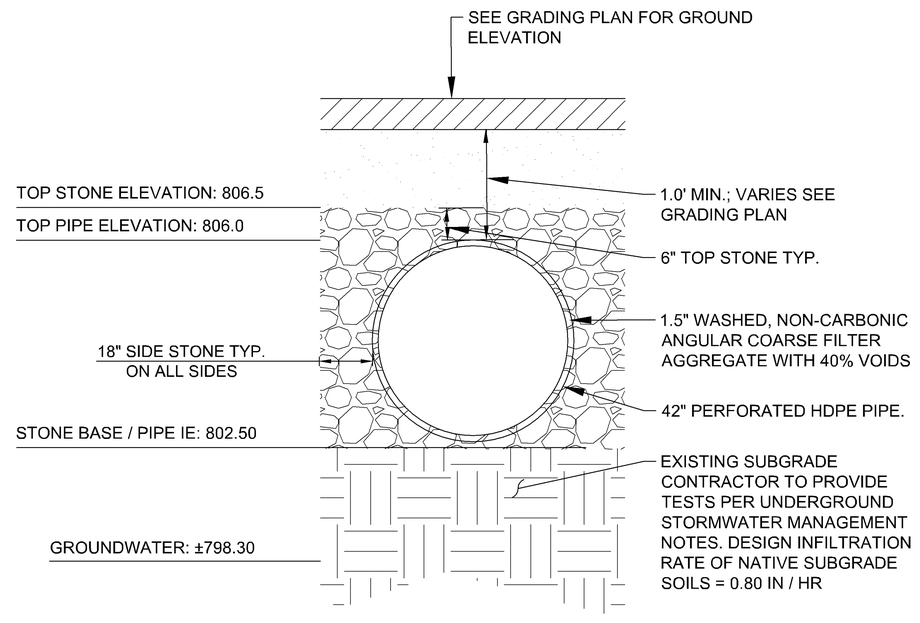
SECTION

BMP#3 OUTLET CONTROL STRUCTURE (STRM 301)



BMP #1
UNDERGROUND INFILTRATION SYSTEM DETAILS
NOT TO SCALE

NOTES:
1. ALL HDPE CONNECTIONS SHALL BE MADE WITH WATERTIGHT MATERIALS.
2. THE CONTRACTOR SHALL TAKE CARE TO PREVENT SEDIMENT AND DEBRIS FROM CLOGGING THE PORE SPACE IN THE COARSE FILTER AGGREGATE.



BMP #3
UNDERGROUND INFILTRATION SYSTEM DETAILS
NOT TO SCALE

NOTES:
1. ALL HDPE CONNECTIONS SHALL BE MADE WITH WATERTIGHT MATERIALS.
2. THE CONTRACTOR SHALL TAKE CARE TO PREVENT SEDIMENT AND DEBRIS FROM CLOGGING THE PORE SPACE IN THE COARSE FILTER AGGREGATE.

CLOW BERG
9800 River Road East Suite 350 Hopkins, Minnesota 55343 612-345-3500

Kimley»Horn
2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
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revisions		
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phase	PRE-DRC
date	02.09.2021
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checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

sheet title
GRADING AND DRAINAGE
DETAILS

sheet number
C502

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	EPM NAME EPM NUMBER EPM EMAIL
ADS SALES REP	SALES NAME SALES NUMBER SALES EMAIL
PROJECT NO.	

ADVANCED DRAINAGE SYSTEMS, INC.

SiteASSIST FOR STORMTECH INSTRUCTIONS, DOWNLOAD THE INSTALLATION APP

BLOOMINGTON INDUSTRIAL 2

BLOOMINGTON, MN

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT	
78	STORMTECH MC-3500 CHAMBERS
6	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
40	% STONE VOID
15182	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)
4539	SYSTEM AREA (SF)
446.40	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	816.00
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	810.50
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	809.50
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	809.50
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	809.50
TOP OF STONE:	809.00
TOP OF MC-3500 CHAMBER:	808.00
24" ISOLATOR ROW INVERT:	804.42
18" x 18" BOTTOM MANIFOLD INVERT:	804.40
18" x 18" BOTTOM MANIFOLD INVERT:	804.40
18" BOTTOM CONNECTION INVERT:	804.40
BOTTOM OF MC-3500 CHAMBER:	804.25
UNDERDRAIN INVERT:	803.50
BOTTOM OF STONE:	803.50

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP/TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR ROWS	2.06"	
PREFABRICATED END CAP	B	18" BOTTOM CORED END CAP/TYP OF ALL 18" BOTTOM CONNECTIONS	1.77"	
MANIFOLD	C	18" X 18" BOTTOM, ADS N-12	1.77"	
MANIFOLD	D	18" X 18" BOTTOM, ADS N-12	1.77"	
PIPE CONNECTION	E	18" BOTTOM CONNECTION	1.77"	
CONCRETE STRUCTURE	F	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		8.0 CFS OUT
CONCRETE STRUCTURE W/WEIR	G	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		11.0 CFS IN
UNDERDRAIN	H	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		

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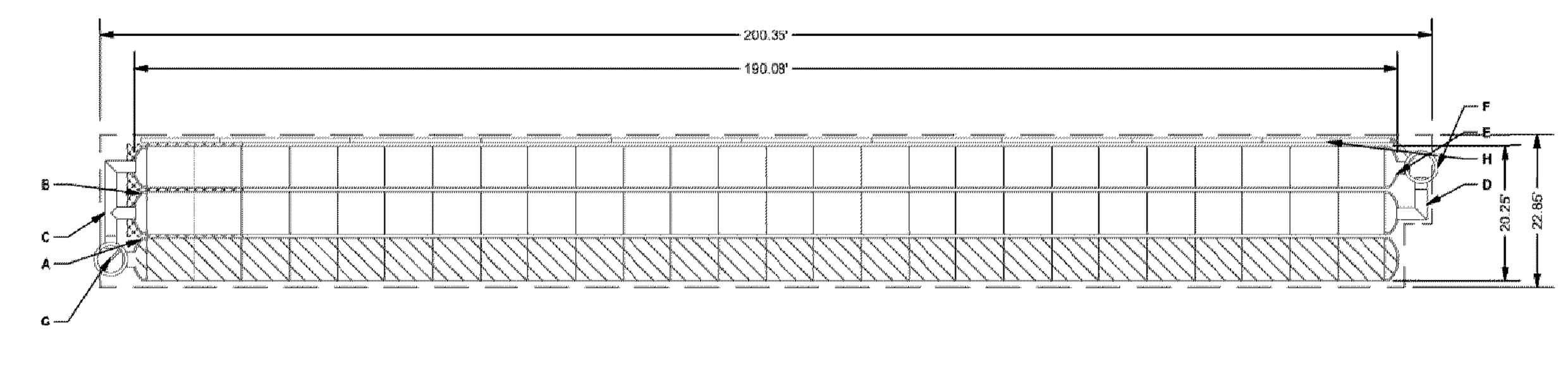


ISOLATOR ROW (SEE DETAIL)

PLACE MINIMUM 17.50' OF ADS GEOSYNTHETICS 315WTM WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- NOT FOR CONSTRUCTION

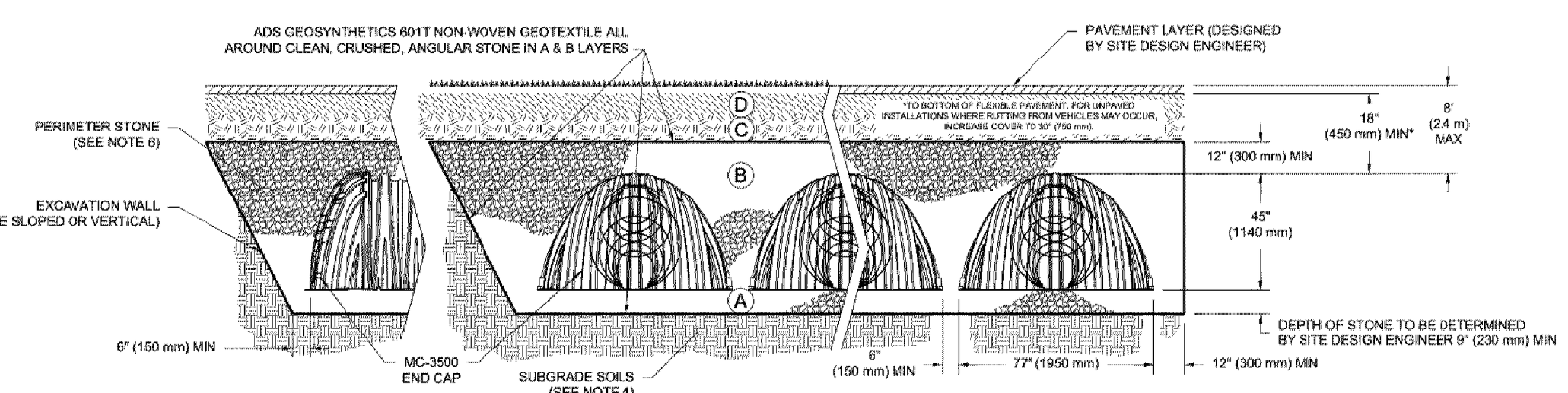
BLOOMINGTON INDUSTRIAL 2
BLOOMINGTON, MN
DATE: | DRAWN: LC | PROJECT #: | CHECKED: N/A
REV | DRW | CHK | DESCRIPTION
StormTech 70 INWOOD ROAD, SUITE 3 | ROCKY HILL | CT | 06067 860-529-8188 |888-892-2694 | WWW.STORMTECH.COM
ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473
0 20' 40'
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET 2 OF 5

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

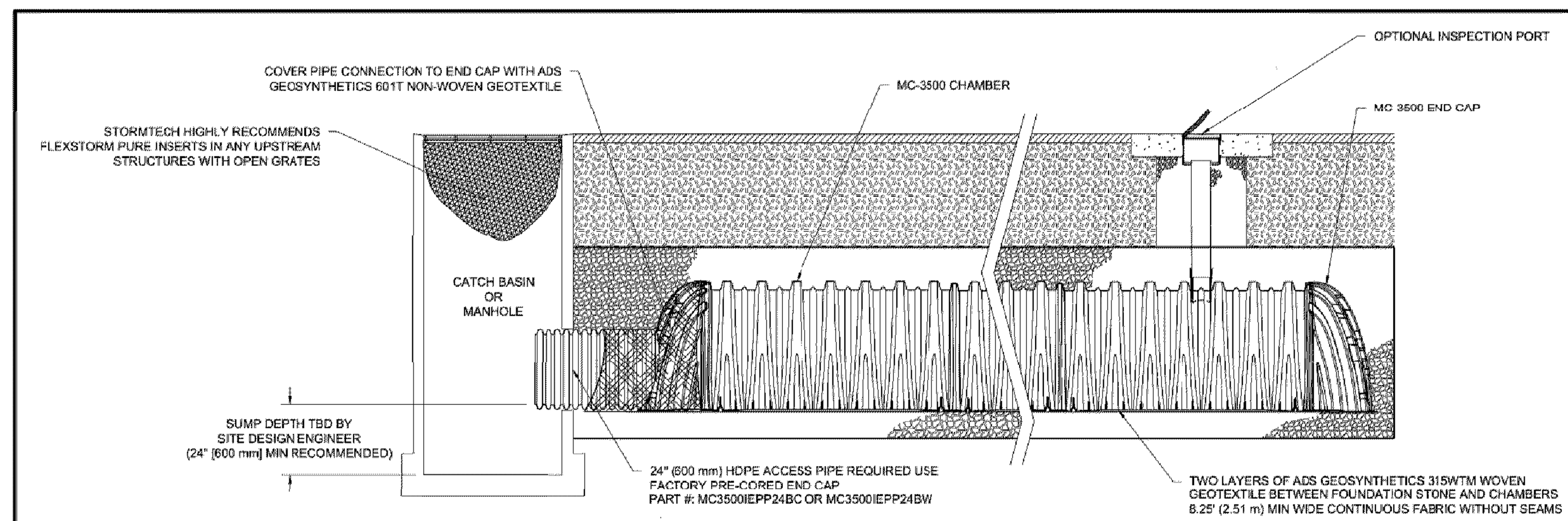
PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

SHEET 3 OF 5



MC-3500 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

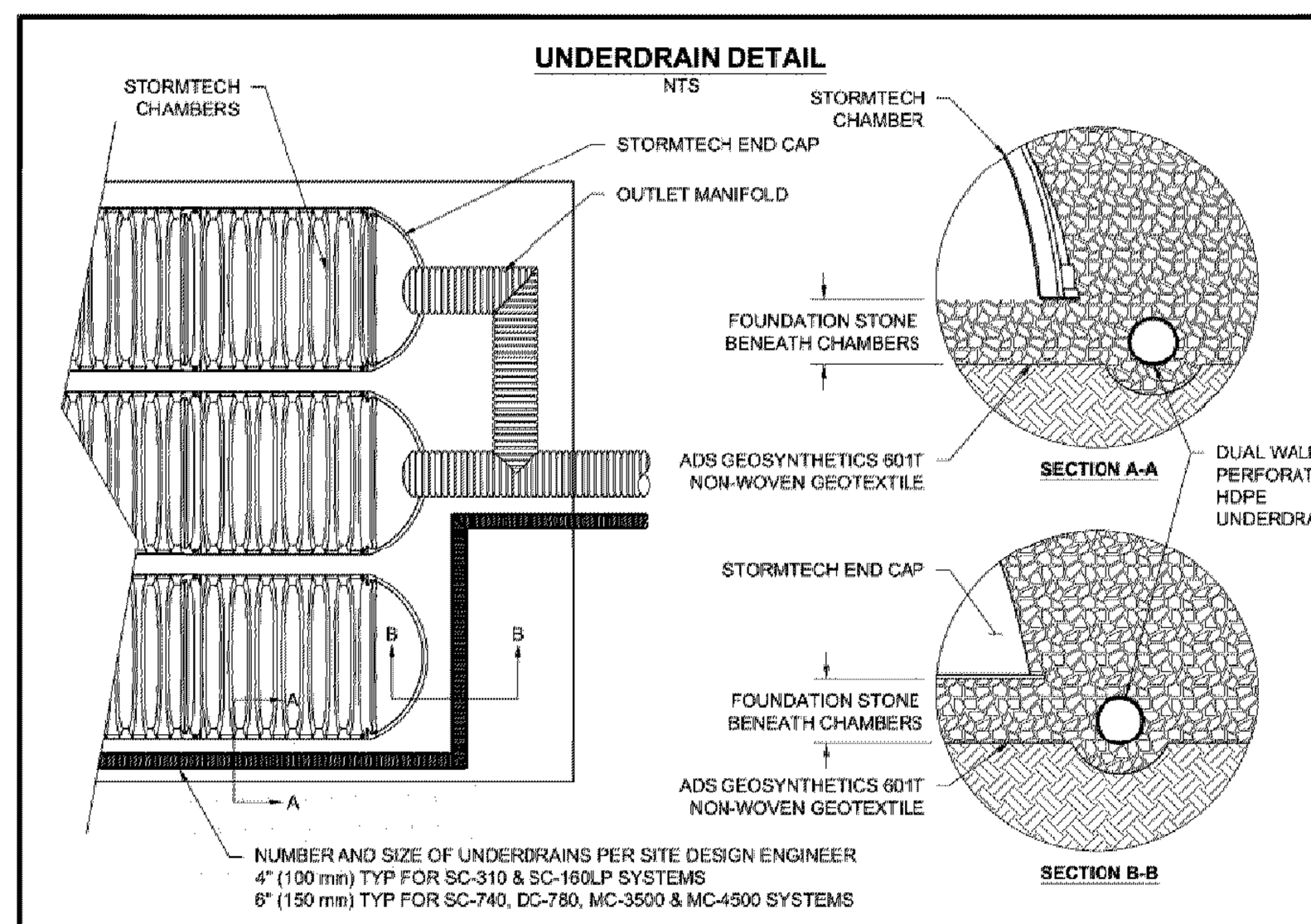
STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

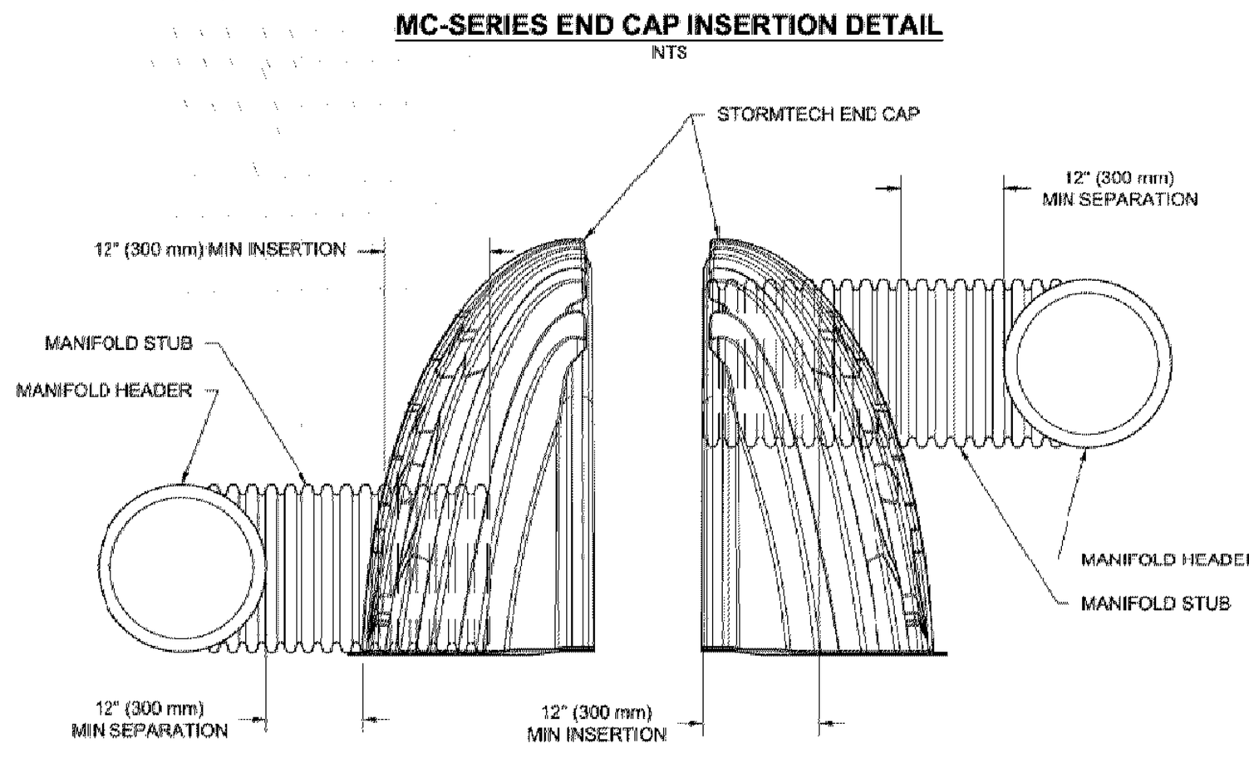
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SHEET 4 OF 5

UNDERDRAIN DETAIL
NTS

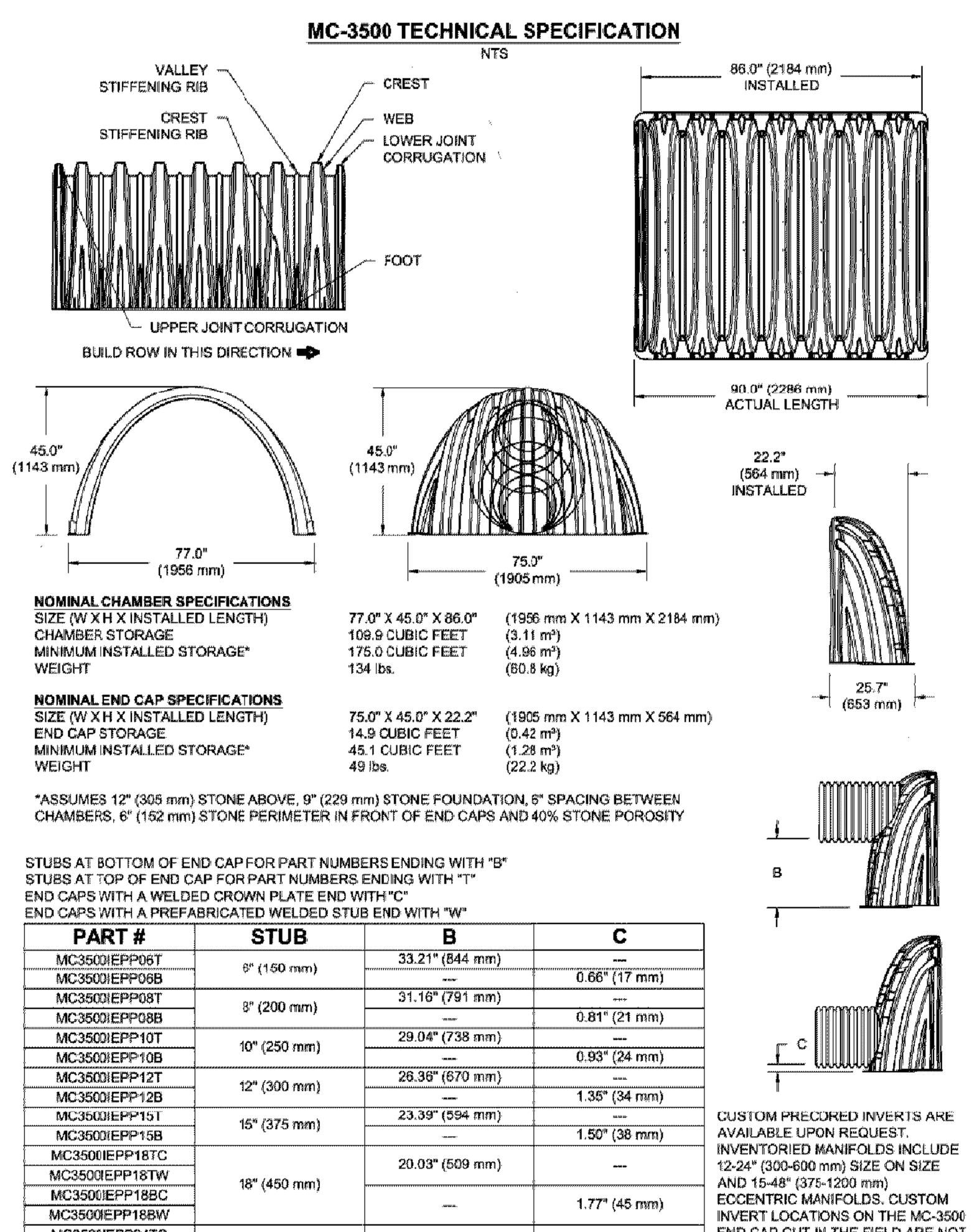


MC-SERIES END CAP INSERTION DETAIL
NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

MC-3500 TECHNICAL SPECIFICATION
NTS



NOMINAL CHAMBER SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH) 77.0" X 45.0" X 86.0" (1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE 109.9 CUBIC FEET (3.11 m³)
MINIMUM INSTALLED STORAGE* 175.0 CUBIC FEET (4.96 m³)
WEIGHT 134 lbs. (60.8 kg)

NOMINAL END CAP SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH) 75.0" X 45.0" X 22.2" (1905 mm X 1143 mm X 564 mm)
END CAP STORAGE 14.9 CUBIC FEET (0.42 m³)
MINIMUM INSTALLED STORAGE* 45.1 CUBIC FEET (1.28 m³)
WEIGHT 49 lbs. (22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

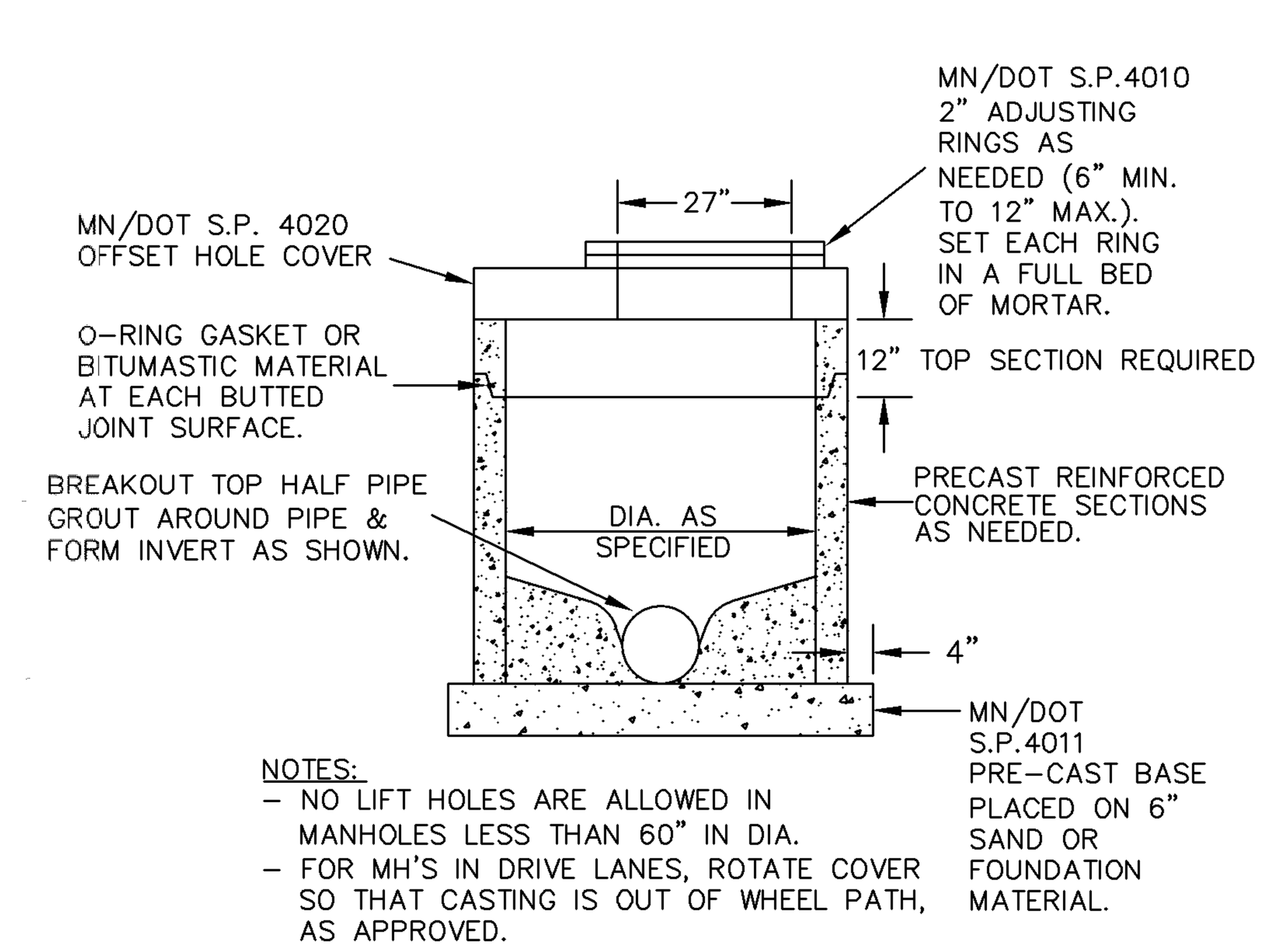
STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL

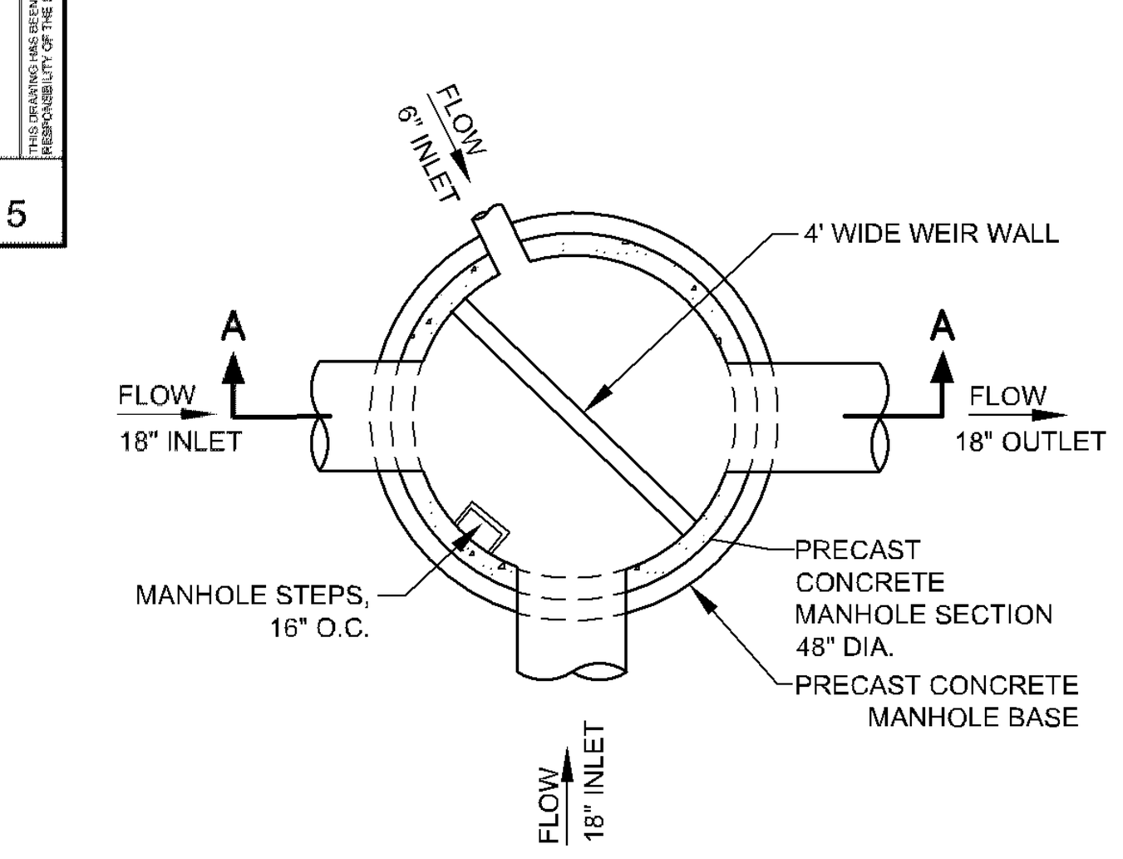
CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

SHEET 5 OF 5

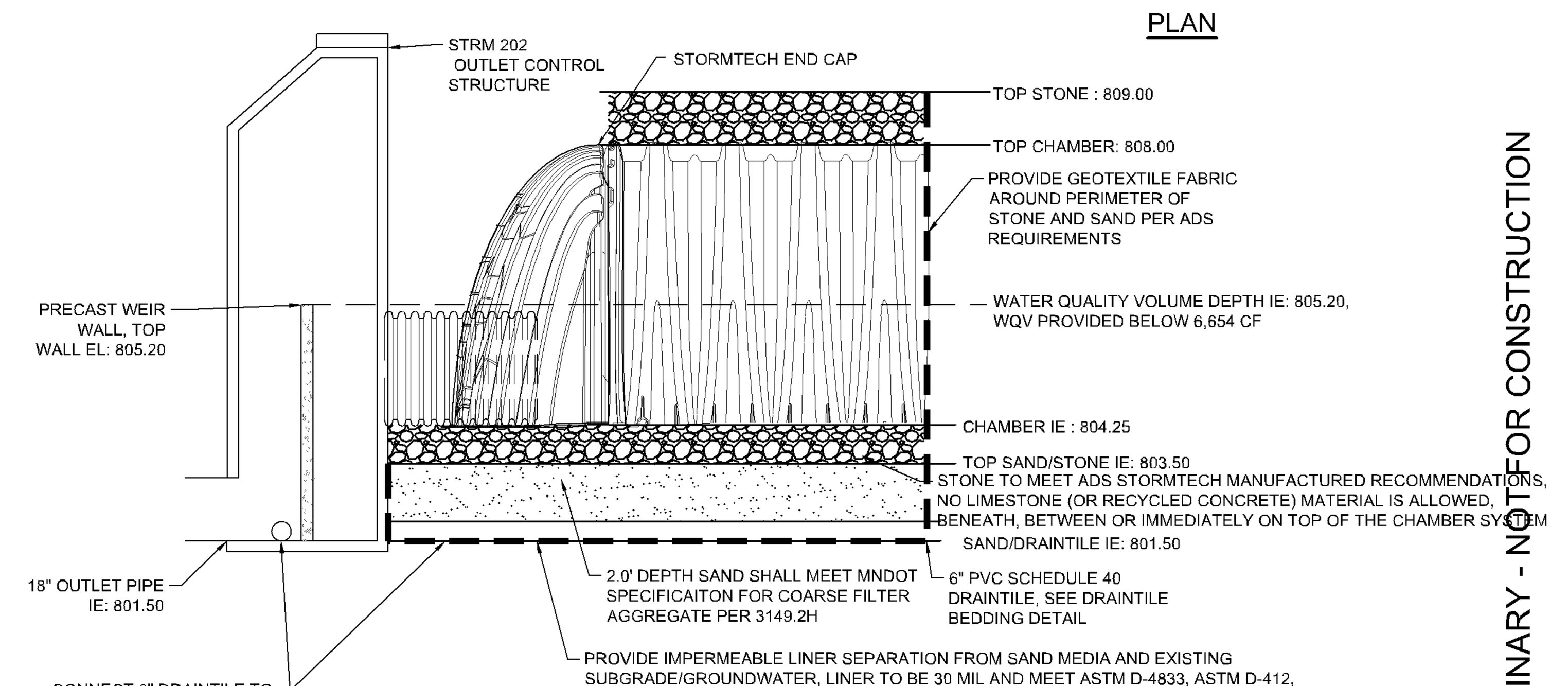


NOTES:
- NO LIFT HOLES ARE ALLOWED IN MANHOLES LESS THAN 60" IN DIA.
- FOR MH'S IN DRIVE LANES, ROTATE COVER SO THAT CASTING IS OUT OF WHEEL PATH, AS APPROVED.

STANDARD MANHOLE DESIGN SPEC X, X & X
STD_MH.DWG 1/2013



PLAN



BMP #2
UNDERGROUND FILTRATION TYPICAL SECTION DETAILS
ADS STORMTECH MC-3500
NOT TO SCALE

PRELIMINARY - NOT FOR CONSTRUCTION

CLOW BERG
9800 Bren Road East ,Suite 290 Hopkins, Minnesota 55343 612-345-2559

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

revisions
no. date description

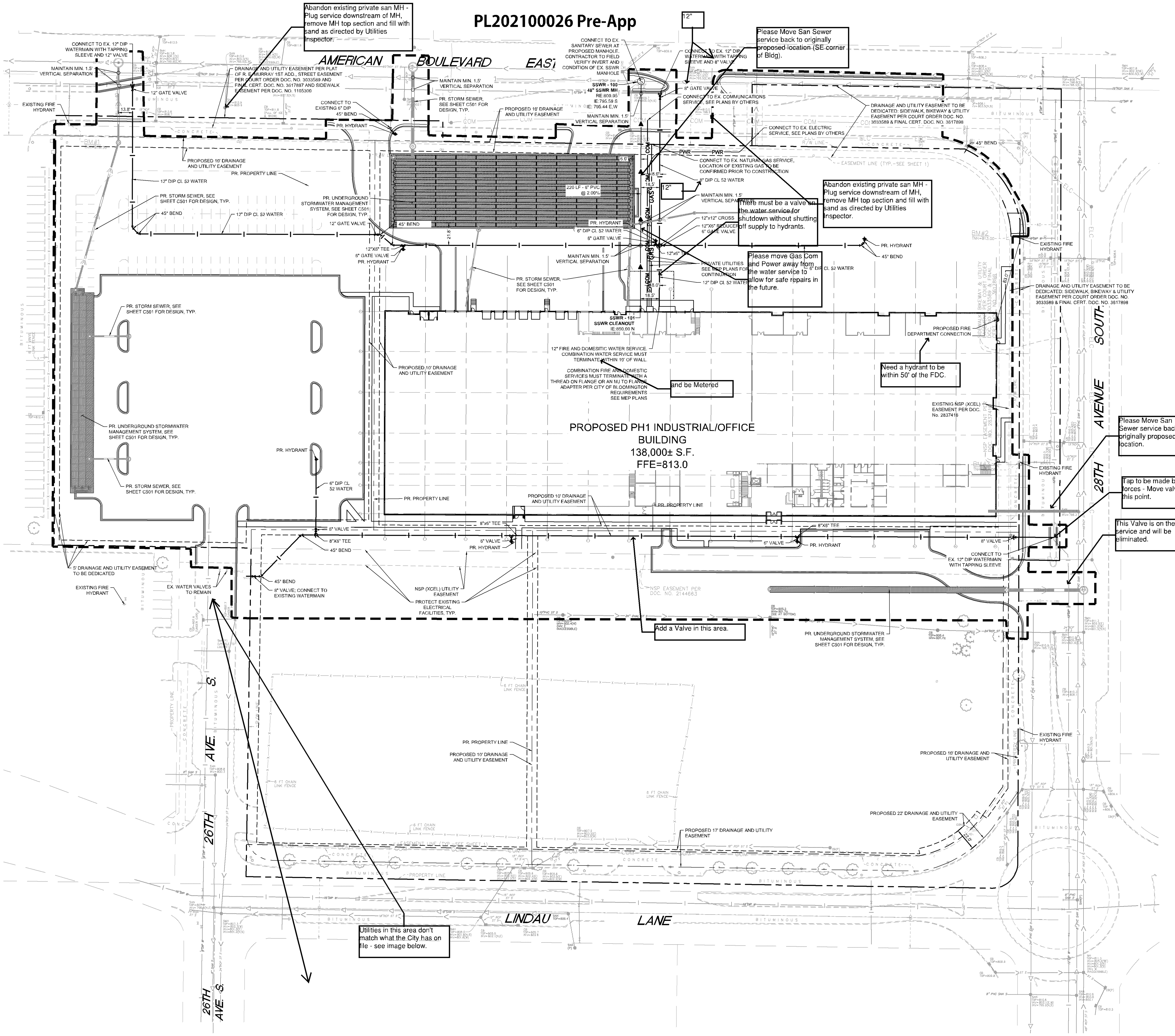
phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

sheet title
GRADING AND DRAINAGE DETAILS

sheet number
C503

PL202100026 Pre-App



CLOW BERG

LEGEND

	PROPOSED TEE
	PROPOSED GATE VALVE
	PROPOSED HYDRANT
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED SANITARY CLEANOUT
	PROPOSED WATERMAIN
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED STORM SEWER
ELC	PROPOSED UNDERGROUND ELECTRIC
COM	PROPOSED TELEPHONE
GAS	PROPOSED GAS MAIN
O-ELC	EXISTING OVERHEAD ELECTRIC
ELC	EXISTING UNDERGROUND ELECTRIC
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING WATERMAIN
COM	EXISTING COMMUNICATIONS CABLE
	EXISTING STORM MANHOLE / STORM CATCHBASIN / SANITARY MANHOLE
	EXISTING STORM CATCHBASIN (ON CURB)
	EXISTING GATE VALVE
	EXISTING HYDRANT
	EXISTING ELECTRICAL TRANSFORMER
	EXISTING COMMUNICATIONS BOX
	EXISTING LIGHT POLE

UTILITY PLAN NOTES

1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
   10" PVC SDR26, SCHEDULE 40, OR EQUIVALENT PER ASTM D 3034
   8" PVC SDR26, SCHEDULE 40, OR EQUIVALENT PER ASTM D 3034
   6" PVC SCHEDULE 40
   DUCTILE IRON PIPE PER AWWA C150
3. WATER LINES SHALL BE AS FOLLOWS:
   6" AND LARGER DUCTILE IRON PIPE PER AWWA C150
   12" AND SMALLER USE CLASS 52 DIP

   A MINIMUM OF 8 MIL POLYWRAP IS REQUIRED ON ALL DIP
4. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
5. ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING AS CALLED OUT IN SPECIFICATIONS.
6. ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
7. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 8'-0" COVER ON ALL WATERLINES.
8. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE SCH. 40 OR C900 WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50).
9. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
10. TOPS OF EXISTING 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.
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.
13. REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
14. 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.
15. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES.
16. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
17. REFER TO BUILDING PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
18. BACKFLOW DEVICES (DDCV AND PRZ ASSEMBLIES) AND METERS ARE LOCATED IN THE INTERIOR OF THE BUILDING. REF. ARCH. PLANS.
19. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES BLOOMINGTON WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
20. ALL ONSITE WATERMAINS AND SANITARY SEWERS SHALL BE PRIVATELY OWNED AND MAINTAINED.
21. ALL WATERMAIN STUBOUTS SHALL BE MECHANICALLY RESTRAINED WITH REACTION BLOCKING.
22. HDPE PIPE CONNECTIONS INTO ALL CONCRETE STRUCTURES MUST BE MADE WITH WATER TIGHT MATERIALS UTILIZING AN A-LOK OR WATERSTOP GASKET OR BOOT, CAST-IN-PLACE RUBBER BOOT, OR APPROVED EQUAL.
23. TAPS OF LIVE WATER MAINS ARE DONE BY CITY FORCES AND PAID FOR AND COORDINATED WITH THE CONTRACTOR.
24. UTILITY AND MECHANICAL CONTRACTORS MUST COORDINATE THE INSTALLATION OF ALL WATER AND SEWER SERVICE PIPES INTO THE BUILDING TO ACCOMMODATE CITY INSPECTION AND TESTING.
25. ALL COMPONENTS OF THE WATER SYSTEM, UP TO THE WATER METER OR FIRE SERVICE EQUIPMENT MUST UTILIZE PROTECTIVE INTERNAL COATINGS MEETING CURRENT ANSI/AWWA STANDARDS FOR CEMENT MORTAR LINING OR SPECIAL COATINGS. THE USE OF UNLINED OR UNCOATED PIPE IS NOT ALLOWED.
26. ALL UNUSED WATER SERVICES MUST BE PROPERLY ABANDONED AT THE MAIN. ALL UNUSED SANITARY SEWER SERVICES MUST PROPERLY ABANDONED AT THE PROPERTY LINE.
27. UTILITY PERMITS ARE REQUIRED FOR CONNECTIONS TO THE PUBLIC STORM, SANITARY, AND WATER SYSTEM. CONTACT CITY OF BLOOMINGTON UTILITIES DIVISION (952-563-8777) FOR PERMIT INFORMATION.
28. RESTORE UTILITY TRENCHES PER STANDARDS LISTED IN ARTICLE 5, CH. 17 OF THE BLOOMINGTON CITY CODE (SEE UTILITY DETAILS).
29. INTERIOR CHIMNEY SEALS SHALL BE INSTALLED ON ALL SANITARY MANHOLES.

Kimley»Horn
2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

revisions

no.	date	description

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.

WILLIAM D. MATZEK, P.E.

DATE: ________ MN LIC. NO. 45790

phase	PRE-DRC
date	02.09.2021
drawn by	LEC
checked by	WDM
project number	160687009
project name	

SICK - CAMPUS USA
PHASE 1

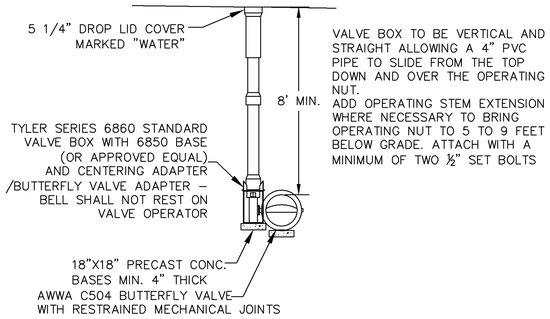
UTILITY PLAN

PRELIMINARY - NOT FOR CONSTRUCTION

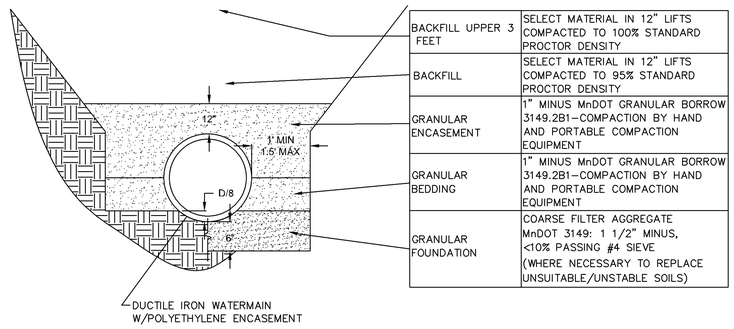
NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

C600

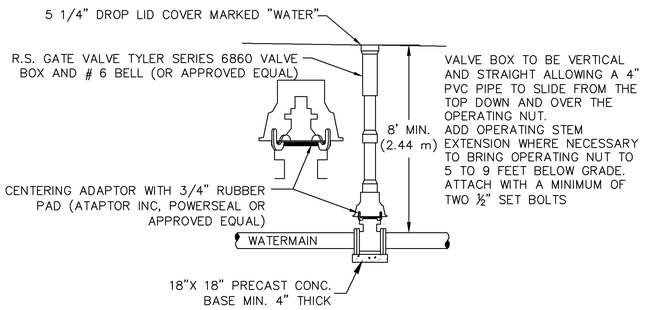


TYPICAL BUTTERFLY VALVE INSTALLATION
BUTTERFLY_VALVE.dwg 1/2015



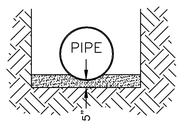
BACKFILL UPPER 3 FEET	SELECT MATERIAL IN 12" LIFTS COMPACTED TO 100% STANDARD PROCTOR DENSITY
BACKFILL	SELECT MATERIAL IN 12" LIFTS COMPACTED TO 95% STANDARD PROCTOR DENSITY
GRANULAR ENCASEMENT	1" MINUS MnDOT GRANULAR BORROW 3149.2B1–COMPACTION BY HAND AND PORTABLE COMPACTION EQUIPMENT
GRANULAR BEDDING	1" MINUS MnDOT GRANULAR BORROW 3149.2B1–COMPACTION BY HAND AND PORTABLE COMPACTION EQUIPMENT
GRANULAR FOUNDATION	COARSE FILTER AGGREGATE MnDOT 3149: 1 1/2" MINUS, <10% PASSING #4 SIEVE (WHERE NECESSARY TO REPLACE UNSUITABLE/UNSTABLE SOILS)

TYPICAL WATER MAIN INSTALLATION DETAIL
WATERMAIN_INST.DWG 11/2012



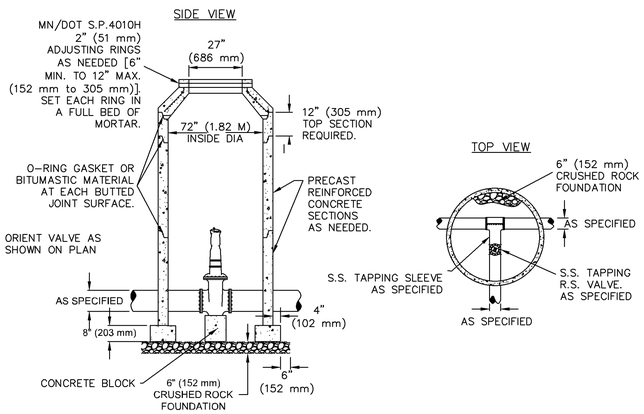
TYPICAL VALVE INSTALLATION
VALVE.dwg 1/2015

PL202100026 Pre-App

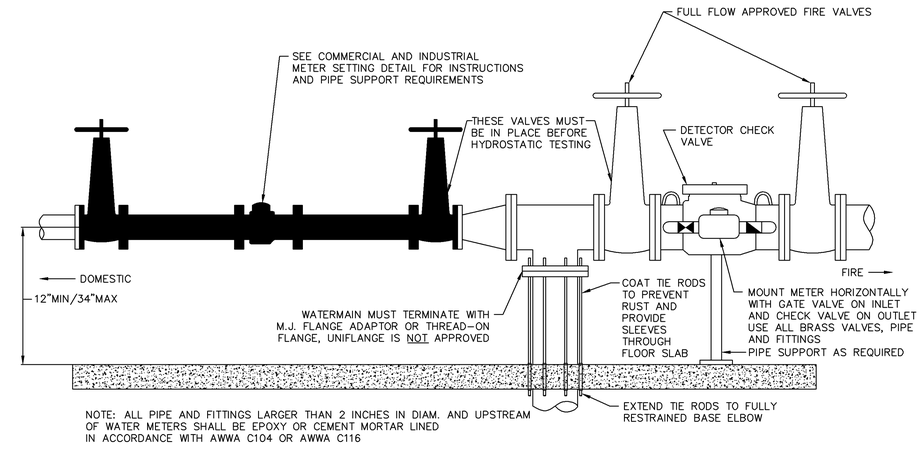


PIPE BEDDED IN GRANULAR BEDDING TO DEPTH OF 5 INCHES. BACKFILL COMPACTED TO FINISHED GRADE.

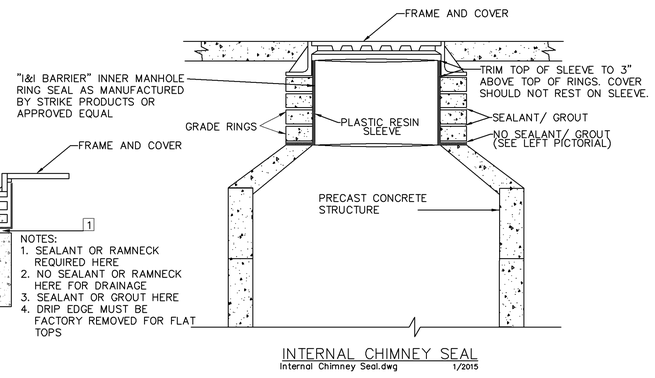
PIPE BEDDING DETAIL
PIPE–BED.DWG 4/2009



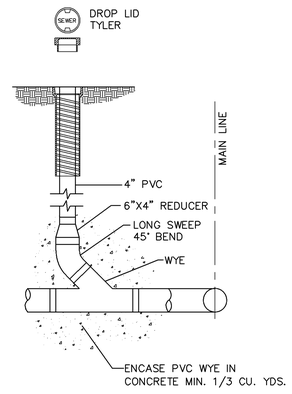
STANDARD TEE/VALVE MANHOLE
VALVE–T_MH.dwg 5/2013



TYPICAL DOMESTIC AND FIRE SERVICE
FIRE–DOMEST SERV.dwg 1/2015



INTERNAL CHIMNEY SEAL
Internal Chimney Seal.dwg 1/2015

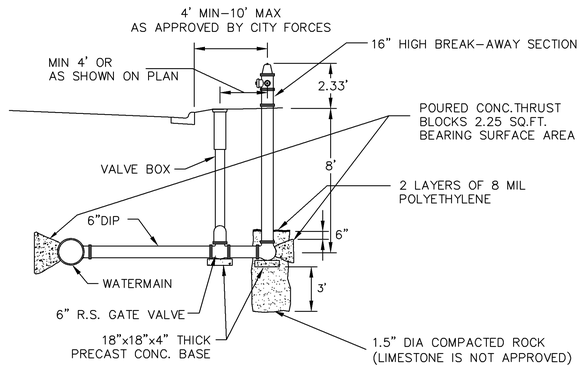


NOTES:
G.V. BOX TOP SECTION WITH DROP LID (SEWER)

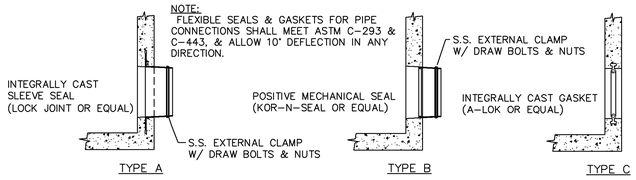
ENCLOSE LONG SWEEP BEND OR COMBINATION WYE IN CONCRETE AS SHOWN.

SANITARY SEWER CLEANOUT

- HYDRANT TO BE:
  - WATEROUS PACER CLASSIC.
  - MUELLER SUPERCENTURION 250 MODEL A–423.
  - OR APPROVED EQUAL.
- EQUIP WITH THREE HOSE NOZZLES/CONNECTIONS AS FOLLOWS:
  - ONE – FACTORY INSTALLED 5 INCH STORZ PUMPER NOZZLE/CONNECTOR, INCLUDING A MANUFACTURER SUPPLIED AND INSTALLED ANODIZED ALUMINUM NOZZLE CAP WITH A 1.5 INCH PENTAGON NUT AND NO ROCKER LUG.
  - TWO – 2.5 INCH HOSE NOZZLES/CONNECTIONS (WITH NATIONAL STANDARD THREADS) AND STANDARD NOZZLE CAPS WITH 1.5 INCH PENTAGON NUTS, AND NO ROCKER LUGS.
- USE SS NUTS AND BOLTS AS APPROVED BY THE ENGINEER.
- ALL EXPOSED WATERMAIN SHALL BE WRAPPED WITH POLYETHYLENE IN ACCORDANCE WITH AWWA C–105.
- BARREL TO BE BRIGHT RED.
- ALL VALVES TO OPEN COUNTER–CLOCKWISE.
- SEE TYPICAL VALVE INSTALLATION DETAIL FOR VALVE DETAILS.
- WATEROUS PACER CLASSIC HYDRANTS SHALL INCLUDE INSTALLATION OF THE MANUFACTURERS MOST CURRENT ANTI–CHATTER BRASS UPPER VALVE WASHER.



TYPICAL HYDRANT INSTALLATION
Hyd_instl.dwg 1/2015



WATER TIGHT PIPE CONNECTIONS
MH_PIPE_CON.dwg 4/2009

CLOW BERG
9800 River Road East Suite 200 Hopkins, Minnesota 55343 612-345-3500

Kimley»Horn
2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
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SICK - CAMPUS USA
PHASE 1

sheet title
UTILITY DETAILS

sheet number
C601