McHENRY COUNTY COLLEGE
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

8900 US Hwy 14, Crystal Lake

OWNER:
McHENRY COUNTY COLLEGE
8900 U.S. HIGHWAY 14
CRYSTAL LAKE, ILLINOIS 60012
PHONE: (815) 455–8564
DIRECTOR OF PHYSICAL FACILITIES
MR. GREG EVANS

ENGINEER / SURVEYOR:
HR GREEN, INC.
420 NORTH FRONT STREET, SUITE 100
McHENRY IL. 60050
PHONE: (815) 385–1778
JOSEPH F. VAVRINA, P.E. – PROJECT MANAGER
DOUG STALKER – PROJECT SURVEYOR

UTILITY CONFLICTS:

UTILITY SERVICE	CONTACT	TELEPHONE #
WATER SERVICE:	CITY OF CRYSTAL LAKE, ENGINEERING DIVISION 100 WEST WOODSTOCK STREET CRYSTAL LAKE, IL 60014 MR. VICTOR RAMIREZ	(815) 459–2020
SANITARY SERVICE:	CITY OF CRYSTAL LAKE, ENGINEERING DIVISION 100 WEST WOODSTOCK STREET CRYSTAL LAKE, IL 60014 MR. VICTOR RAMIREZ	(815) 459–2020
STORM DRAINAGE:	CITY OF CRYSTAL LAKE, ENGINEERING DIVISION 100 WEST WOODSTOCK STREET CRYSTAL LAKE, IL 60014 MR. ERIK MORIMOTO	(815) 356–3615
ELECTRIC SERVICE:	COMMONWEALTH EDISON 350 S. 2ND STREET ELGIN, IL 60123 MR. JAYVEE ROLDAN	(847) 608–2382
TELEPHONE SERVICE:	AT&T ILLINOIS 222 WEST JACKSON STREET WOODSTOCK, IL 60098 MR. STEVEN JONES	(815) 394–7270
GAS SERVICE:	NICOR 300 WEST TERRA COTTA AVENUE CRYSTAL LAKE, IL 60014 MR. TIM HENEGHAN	(847) 598–4005
ROADWAY AUTHORITY:	ILLINOIS DEPARTMENT OF TRANSPORTATION 201 WEST CENTER COURT SCHAUMBURG, IL 60196 MR. TOMAS GALLENBACH	(847) 705–4143

SITE BENCHMARKS:

SITE BENCHMARK #1:
CHISELED SQUARE ON TOP OF CONCRETE TRAFFIC CONTROLLER BASE. LOCATED AT THE SOUTHEASTERN CORNER OF THE INTERSECTION OF THE MAIN ACCESS DRIVE AND U.S. HIGHWAY 14
ELEVATION=922.53 (NAVD88)

SITE BENCHMARK #2:
CHISELED SQUARE ON TOP OF CONCRETE LIGHT POLE BASE. LOCATED JUST SOUTHEASTERLY FROM MAIN ENTRANCE OF THE BUILDING
ELEVATION=920.01 (NAVD88)

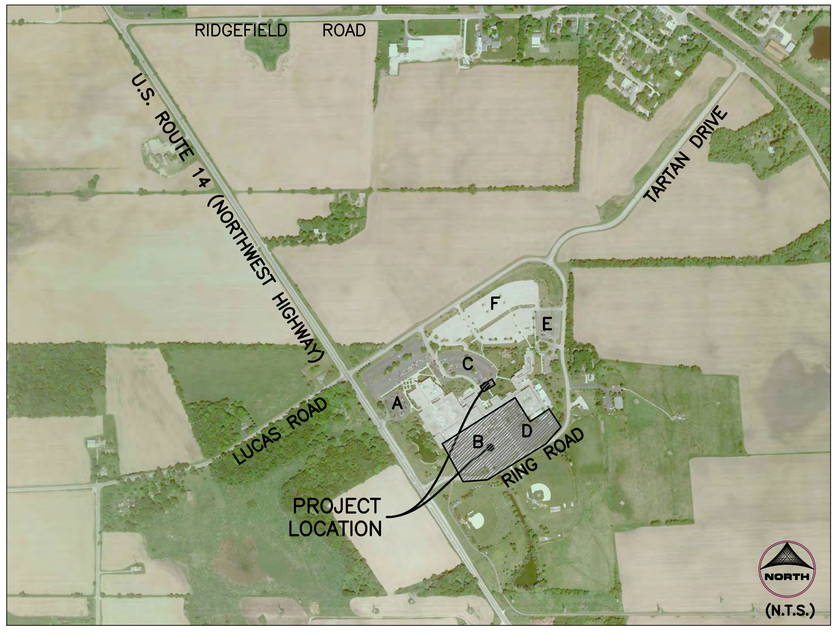
SITE BENCHMARK #3:
CHISELED SQUARE ON TOP OF CONCRETE LIGHT POLE BASE. ON THE LAST LIGHT POLE BASE OFF OF THE MAIN ACCESS ROAD OF THE MAIN SOUTHEASTERLY PARKING LOT.
ELEVATION=921.43 (NAVD88)

Dial 811 or 1-800-892-0123
Know what's below. Call before you dig.

CALL JULIE 1–800–892–0123
WITH THE FOLLOWING:
COUNTY McHenry
CITY–TOWNSHIP City of Crystal Lake, Dorr
SEC. & 1/4 SEC. NO.# SW 1/4 OF SEC–25–T–44N.–7E
48 hours before you dig
(Excluding Sat., Sun. & Holidays)

McHenry County College

LOCATION MAP



SHEET INDEX

HRGreen

420 N. FRONT STREET, SUITE 100 | McHENRY, IL 60050
Phone: 815.385.1778 | Toll Free: 800.728.7805 | Fax: 815.385.1781 | HRGreen.com

NOTE:
* HR GREEN, INC. IS TO BE NOTIFIED 3 DAYS PRIOR TO CONSTRUCTION START.
* HR GREEN, INC. SHALL BE INCLUDED IN ALL PRE–CONSTRUCTION MEETINGS.
* PLANS WERE PREPARED WITH THE INTENT THAT HR GREEN, INC. WILL DO ALL CONSTRUCTION STAKING.
* ANY DISCREPANCIES ON THIS PLAN SET MUST BE NOTED AND HR GREEN, INC. NOTIFIED PRIOR TO ACTUAL CONSTRUCTION.

DRAWN BY: MPL | JOB DATE: 2013
APPROVED: JFV | JOB NUMBER: 86120379
CAD DATE: 5/21/2013 7:29:19 AM
CAD FILE: O:\86120379\CAD\Parking_Lot\Dwgs\C\86120379–Cover.dwg
BAR IS ONE INCH ON OFFICIAL DRAWINGS. IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	05/17/13	TMR	PER CITY COMMENTS

HRGreen
ILLINOIS DESIGN FIRM # 184.001322
420 N. FRONT STREET, SUITE 100
McHENRY, ILLINOIS 60050
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805
FAX: 815.385.1781 | HRGreen.com

McHenry County College

McHENRY COUNTY COLLEGE
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
COVER SHEET

SHEET NO.
C–01

SPECIFICATIONS & GENERAL NOTES

All items of this project shall be governed by specifications included in the documents listed below:

A. "Standard Specifications for Road and Bridge Construction" prepared by the Department of Transportation of the State of Illinois and adopted by said department (latest revision).

B. "Supplemental Specifications and Recurring Special Provisions" adopted by the Illinois Department of Transportation (latest revision date).

C. "Standards and Specifications for Soil Erosion and Sediment Control" (latest revision).

D. "Standard Specifications for Water and Sewer Main Construction in Illinois" (latest revision).

In addition the following special provisions supplement the said specifications, and in case of conflict with any part or parts of said specifications, these special provisions shall take precedence and shall govern.

1. SCOPE OF WORK. The proposed improvement consists of supplying all the necessary labor, material and equipment to satisfactorily construct and install all improvements according to the plans designated as "McHENRY COUNTY COLLEGE PARKING LOT RECONSTRUCTION."

2. CONSTRUCTION OF UNDERGROUND UTILITIES

 A. Excavation: Where working conditions and right-of-way permit, pipe line trenches with sloping sides may be used.

 The slopes shall not extend below the top of the pipe, and trench excavations below this point shall be made with vertical sides with widths not exceeding those specified herein for the various sizes of pipe.

 Open-cut trenches shall be sheeted and braced as required by the governing State and Federal laws and municipal ordinances, and as may be necessary to protect life, property, or the work.

 Where firm foundation is not encountered at the grade established due to unsuitable soil, all such unsuitable material shall be removed and replaced with approved compacted granular material.

 B. Width of trench: See trench detail.

 C. Removal of water: Contractors shall, at all times during construction, provide and maintain ample means and devices with which to remove and properly dispose of all water entering the excavations. No sanitary sewer shall be used for disposal of trench water, unless specifically approved by the Engineer and then only if the trench water does not ultimately arrive at existing pumping or sewage treatment facilities.

 D. Bedding of pipe: All pipe shall be installed on a bed of approved, compacted granular material unless otherwise approved by the City Engineer. The bedding and backfilling of excavated materials shall be cleared with City first and be installed as per typical trench backfill detail.

 E. Special backfill: Whenever the excavation is in existing or proposed street, parking areas, driveways, or other paved areas, the trench shall be backfilled with approved selected granular material, compacted in place. The top 12" of the backfill shall be filled with road gravel or crushed stone and maintained as a temporary surface for the normal use of the area. Special backfill shall meet the requirements of the detail UG-03 found on Sheet C-16. Note: Excavated materials may be used if approved by the City Engineer.

 F. Restoration of drainage: As soon as possible after backfilling the trench, all ditching, grading and shaping necessary to restore the original drainage in the area of work shall be performed. Culverts removed during the course of the work shall be replaced as soon as practicable.

 Adequate temporary drainage facilities shall be provided during construction.

 G. Utilities: The Contractor shall notify all utilities prior to the installation of any pipe lines. Where conflict exists between underground utilities and the proposed underground piping requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the City Engineer in writing.

3. The subgrade shall be free of unsuitable material and shall be prepared in accordance with the recommendations noted in the geotechnical report prepared by Midland Standard. dated April 23, 2013 for this project. Testing for compaction shall be the responsibility of the contractor. The City of Crystal Lake will require a proof-roll test if warranted by final soil compaction. This also applies to the parking lot and aisle subgrade and also upon gravel placement. All topsoil and any organic materials must be removed.

4. Easements for the existing utilities, both public and private, and utilities within public rights-of-way are shown on the plans according to available records. The Contractor shall be responsible for determining the exact location in the field of these utility lines and their protection from damage due to construction operations. If existing utility lines of any nature are encountered which conflict in location with new construction, the Contractor shall notify the Engineer so that the conflict may be resolved.

5. Contractor shall be responsible for securing all Permits including municipal permits.

6. INSPECTION. All improvements shall be subject to inspection by a duly authorized and qualified City inspector both during the course of construction and after construction is complete. The Inspector shall have authority over materials of construction, methods of construction and workmanship to insure compliance with working drawings and specifications. The Contractor shall provide for reasonable tests and proof of quality of materials as requested by the Inspector. Inspector shall have forty-eight (48) hours notice prior to construction.

7. Wherever a sewer crosses under a water main, the minimum vertical distance from the top of the sewer to the bottom of the water main shall be 18". Furthermore, a minimum horizontal distance of 10' between sanitary sewers and water mains shall be maintained. If either the vertical or horizontal distances described above cannot be maintained, or the sewer crosses above the water main, the sewer pipe shall be pipe of water main type quality and water main quality joints, or the water main shall be encased in a steel sleeve for a perpendicular distance of 10' on each side of the sewer.

8. WATER AND SEWER REGULATIONS. (For the City of Crystal Lake)

 PVC Plastic Sewer Pipe:

 PVC plastic sewer pipe and fittings of sizes 4" through 15" shall conform to the latest revised specification requirements of ASTM D3034 for Type PSM polyvinyl chloride (PVC) sewer pipe and fittings of minimum wall thickness DR 35, and the joints shall be either the solvent weld type conforming to the latest revised specification requirements of ASTM D2564 and ASTM D2855, or elastomeric gasket type conforming to the latest revised specification requirements of ASTM D1869 and ASTM D3212. A thicker walled pipe such as DR 26 may be specified by the Engineer depending on design and/or field conditions. PVC plastic sewer pipe and fittings of sizes 18" through 36" shall conform to the latest revised specification requirements of ASTM F679 for polyvinyl chloride (PVC) large diameter plastic gravity sewer pipe and fittings of minimum wall thickness T-1, or ASTM F794 for Series 46 polyvinyl chloride (PVC) large diameter ribbed gravity sewer pipe and fittings, with integral bell gasketed joints and elastomeric gaskets to form a watertight seal conforming to the latest revised specification requirements of ASTM F477 or ASTM D3212. Pipe and fittings shall be the products of one approved manufacturer only, and there shall not be any mixing of pipe and fittings of different manufacturers. The handling and installation of pipe, assembly or joints, and manhole connections shall be in accordance with the manufacturer's recommendations. Gasket-type waterstop collars consisting of a neoprene collar and a stainless steel band or other approved manhole waterstop shall be installed wherever the pipe passes through the manhole walls to provide a watertight joint to prohibit infiltration into the sewer system.

 Installation of PVC Pipe:

 PVC pipe shall be installed in accordance with the latest revised specification requirements of ASTM D2321 using either compacted Class I or Class II granular embedment materials for bedding, haunching and initial backfill of 12" over the top of pipe to provide the necessary support for the pipe so that the maximum deflection does not exceed five percent (5%) of the pipe's original internal diameter.

 Ductile Iron Pipe:

 Ductile iron pipe shall conform to ANSI A 21.51 (AWWA C151), class 52 thickness designed per ANSI A 21.50 (AWWA C150), Tar (seal) coated and cement lined per ANSI A 21.4 (AWWA C104), with mechanical or rubber ring (slip seal or push on) joints, plans or special provisions shall indicate standard designation, thickness, class, coating and/or lining, and joint type.

 All Water Mains shall be Ductile Iron Pipe CL 52.

 Joints for Ductile Iron Pipe:

 Joints for ductile iron pipe shall be in accordance with the following applicable specifications unless otherwise noted:

 1. Mechanical joints – AWWA C111 and C600

 2. Push-on joints – AWWA C111 and C600

 TESTING: INFILTRATION, EXFILTRATION OR AIR TESTING OF SANITARY SEWER SHALL BE COMPLETED BY THE CONTRACTOR IN CONFORMANCE WITH SECTION 31-1.11 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS. ALL PLASTIC SANITARY SEWER PIPE SHALL BE TESTED FOR DEFLECTION IN CONFORMANCE WITH SECTION 31-1.11 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS.

 All watermains and water services shall have a minimum bury depth of 6 feet.

9. SAN. MH TA, 48" DIA. Manholes shall be constructed of prefabricated concrete sections meeting the requirements of ASTM C-478. Sections shall be joined using either flexible rubber gaskets or preformed bituminous plastic gaskets. The manhole bottom shall be precast with the first riser section. Manholes shall have the pipe cast in place through the manhole or a water tight joint cast in the manhole wall to receive the pipe. Manhole frames and lids shall be of self-sealing type Neenah 1712 or equal with approval by the municipality, with Type B lid and concealed pickhole with the word "Sanitary" cast in the lid. (See City detail) Testing: Vacuum testing of sanitary manholes shall be completed by the contractor meeting the requirements of ASTM C-244.

10. All manholes to be concentric, lids to have utility name.

11. All manholes and valve vaults shall be equipped with steps.

12. STORM SEWER MATERIAL

 Storm sewers shall be of reinforced concrete pipe conforming to ASTM C76 minimum Class III with O-rings conforming to ASTM C443. All inlet connections shall be concrete sewer pipe. ASTM C14 for extra strength pipe. All Storm Sewers denoted as PVC Storm Sewer shall conform to ASTM D 3034, type PSM for sizes 10"-15" and ASTM F-679-89 for sizes 18"-36" Minimum acceptable SDR shall be 35. The pipe shall be made of PVC plastic having a minimum cell classification of 12454-C, and shall be have a minimum pipe stiffness of forty-six (46) lbs. per inch per inch (317 kpa). Joints for PVC pipe should be the Integral Bell Gasket type with elastomeric gaskets complying with ASTM F-477 and ASTM D-3212. All inlet connections shall be concrete sewer pipe, ASTM C14 for extra strength pipe.

13. Storm Sewer Manholes and Catch Basins

 A. Manholes and catch basins shall have precast reinforced concrete barrel sections conforming to ASTM C478 with preformed bituminous joints and with integral precast-in-place bottoms. Precast slab bottoms may be used for manholes to be built in existing storm sewerage system lines.

 B. No more than two precast concrete adjusting rings shall be allowed for a maximum height adjustment of eight inches. all structures shall be wrapped with fabric around the frame, adjusting rings, and down six inches onto the structure.

 C. Each manhole shall have a poured Class SI concrete bench carefully shaped to drain to the outlet pipe.

14. Inlets

 A. Inlets shall be constructed of precast reinforced concrete conforming to ASTM C478 with "O-ring or preformed bituminous joints and with precast-in-place bottom. Inlets shall have a wall thickness of no less than four inches.

 B. No more than two precast concrete adjusting rings shall be allowed for a maximum height adjustment of eight inches. All structures shall be wrapped with fabric around the frame, adjusting rings, and down six inches onto the structure.

 C. A Class SI concrete bench shall be poured in the bottom of each inlet and shaped to drain to the outlet pipe. The fall across the inlet shall be no less than four inches.

15. STORM SEWER FRAMES AND LIDS. All frames not falling in the flow line of the curb and gutter shall be Neenah 1712 or as noted on the plans with a 1" pickhole and the word "Storm" cast in the lid. All curb inlets, and catch basins in gutter lines shall be Neenah R-3281 Frame and Grate, or as noted on plans, with ENVIRO logo where Type B-6.12 curb and gutter is specified. All storm sewer grates shall have the ENVIRO Logo on them. All bituminous joining compound for manholes and catch basins shall be RAM-NEK or E-Z STICK.

17. PROTECTION OF WATER MAIN AND WATER SERVICE LINES. Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows;

 A. Water Service Lines

 1. Horizontal Separation

 a. Water mains shall be laid at least 10' horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.

 b. Water mains may be laid closer than 10' to a sewer line when:

 (1) Local conditions present a lateral separation of 10';

 (2) The water main invert is at least 18" above the crown of the sewer; and

 (3) The water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer with a minimum vertical separation of 18".

 c. Both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, or PVC pipe meeting the requirements of Section 653.111 when it is impossible to meet (a) or (b) above. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling.

 2. Vertical Separation

 a. A water main shall be laid so that its invert is 18" above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main located within 10' horizontally of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.

 b. Both the water main and sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, or PVC pipe meeting requirements of Section 653.111 when:

 (1) It is impossible to obtain the proper vertical separation as described in (a) above; and

 (2) The water main passes under a sewer or drain.

 c. A vertical separation of 18" between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support the sewer or drain lines to prevent settling and breaking the water main.

 d. Construction shall extend on each side of the crossing until the normal distance from the water main to the sewer or drain line is at least 10'.

 B. Special Conditions. Alternate solutions shall be presented to the Agency when extreme topographical, geological or existing structural conditions make strict compliance with (A) and (B) above technically and economically impractical. Alternate solutions will be approved provided water-tight construction structurally equivalent to approved water main material is proposed.

18. The Contractor may not remove any material from the site except as directed by the Owner or Engineer in the case of excess material.

19. EROSION CONTROL.

 It shall be the Contractor's responsibility to properly control erosion on the jobsite. Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the Contractor until the seeding has taken hold. All washouts, gullies, etc. will be regraded and reseeded by the Contractor. The Contractor's responsibility for erosion control shall extend throughout the construction process. The Contractor shall be responsible for clean-up of paved surfaces within and adjacent to the project on a timely basis and/or at the direction of the City Engineer.

20. TOPSOIL PLACEMENT.

 Contractor shall place stockpiled topsoil or imported material on all disturbed areas with 6" topsoil raked smooth to be ready for landscaping (seeding, sod, etc.).

21. BITUMINOUS CONCRETE. Refer to pavement sections on this sheets C-16 AND C-19 for type and thickness

23. The Engineer and City of Crystal Lake Engineering Department shall be notified if, during construction, any buried field tiles are exposed or disturbed. The Contractor shall reconnect said field tiles if deemed necessary.

24. Contractor shall provide insurance coverage as per Article 107.27 of the Standard Specifications. The "Department" shall be taken to mean HR Green, Inc. The policy of insurance shall include HR Green, Inc., the City of Crystal Lake and it's Agents as an additional insured or provide separate coverage with an Owner's Protective Policy, as per the amounts stated in the Standard Specifications. No work shall begin until the certificate of insurance is on file with the Engineer. All costs for insurance shall be considered incidental to the contract.

25. All handicapped parking signs must have a $250.00 fine sign attached.

26. Lighting shall be constructed as per the electrical plan, done under separate contract by Electrical Consultant. All conduit shall be placed outside of any municipal easements except for authorized 90° crossings.

27. The Contractor shall be responsible for the installation and maintenance of adequate signs, traffic control devices, and warning devices to inform and protect the public during all phases of construction. See City Standard Traffic Control detail for lane closures of public roads.

30. The Engineer shall be responsible for the following:

 A. To visit the construction site in order to better carry out the duties and responsibilities assigned by the Owner and undertaken by the Engineer; and

 B. The Engineer shall not, during such visits or as a result of such observations of the Contractor's work in progress, supervise, direct, have control over the Contractor's work, nor shall the Engineer have the authority over the responsibility for the means, methods, techniques, sequences, or procedures of construction selected by the Contractor, for safety precautions and programs incidental to the work of the Contractor, or for any failure of the Contractor to comply with laws, rules, regulations, ordinances, codes or orders applicable to the Contractor furnishing and performing his work. Accordingly, the Engineer can neither guarantee the performance of the construction contracts by the Contractor nor assume responsibility for the Contractor's failure to furnish and perform his work in accordance with the Contract Documents.

31. No construction plans shall be used for construction unless specifically marked "For Construction." Prior to commencement of construction, the Contractor shall verify all dimensions and conditions affecting their work with the actual conditions at the job site. In addition, the Contractor must verify the Engineer's line and grade stakes. If there are any discrepancies from what is shown on the construction plans, he must immediately report same to the Engineer before doing any work, otherwise the Contractor assumes full responsibility. In the event of disagreement between the construction plans, standard specifications and/or special details, the Contractor shall secure written instructions from the Engineer prior to proceeding with any part of the work affected by omissions or discrepancies. Failing to secure such instructions, the Contractor will be considered to have proceeded at his own risk and expense.

In the event of any doubt or question arising with respect to the true meaning of the construction plans or specifications, the decision of the Engineer shall be final and conclusive.

32. The Contractor shall indemnify and hold harmless the City ,City's Engineers their agents and it's employees, HR Green, Inc. and Chick-fil-A, Inc. from and against all claims, damages, losses and expenses, including attorney's fees arising out of or resulting from the performance of the Contractor's work. In any and all claims against the City or its employees, by any employee of the Contractor, or anyone directly or indirectly employed by the Contractor, or anyone for whose acts the Contractor may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount of damages, waiver of subrogation compensation or benefits payable by or for the Contractor under Workmen's Compensation acts, disability benefit acts or other employee benefit acts.

33. Sawing of removal items as noted on the plans, specified in Section 440 of the Standard Specifications, or as required by the engineer, shall be considered incidental to the cost of the item being removed, and no extra compensation will be allowed, unless otherwise specified.

34. SIGN PANEL – TYPE 1, METAL POST – TYPE B. This work shall consist of furnishing and installing Type 1 sign panels on U-channel, and break away sign supports as indicated on the plans. Sign assemblies shall meet the requirements of Standard Specifications for Traffic Control Items.

 Installation of sign assemblies shall be as specified on the plans, in accordance with the Illinois Manual on Uniform Traffic Control Devices and as directed by the Engineer.

 Furnishing, fabricating and installing sign assemblies will be paid for at the contract unit price per square foot for Sign Panel – Type 1 which price will be payment in full for all labor and material necessary to fabricate and install each sign assembly specified on the plans. The posts, including the break away assembly, shall be paid for at the unit price per foot for Metal Post – Type B.

35. PROTECTIVE COAT. This work shall be in accordance with Section 420 of the Standard Specifications insofar as applicable with the following revision.

 The protective coat shall be applied to all exposed surfaces of Combination Concrete Curb and Gutter, Concrete Median and Concrete Corrugated Median.

 This work will be paid for at the contract unit price per square yard for Protective Coat.

36. COMBINATION CONCRETE CURB AND GUTTER. Concrete curb, concrete gutter and combination concrete curb and gutter shall be constructed, measured and paid for in accordance with Section 606 of the Standard Specifications except as follows:

 Revise the last sentence of the second paragraph of Article 606.07 to read as follows: "The traverse joints shall be contraction joints spaced on 12-foot centers."

 Any City requirements regarding expansion & contraction joints shall govern construction.

37. A performance guarantee shall be required (letter of credit) for all public utilities. Also, a two year maintenance bond shall be established upon completion of work.

38. All pavement markings on main access drives, approaches and parking lot shall be painted with two (2) coats of WHITE SHERWIN WILLIAMS "PROMAR TRAFFIC MARKING." Pavement Striping: All proposed pavement striping to be paint. All Handicap striping shall be yellow.

39. All curb & gutter crossings over trench locations shall be reinforced with 2-#4 rebar extended 2' beyond each side of trench

40. Where storm sewer is located above the water main, the reinforced concrete pipe shall have O-rings to provide a water tight seal and to create a water quality pipe.

41. CURB RAMPS
 All sidewalks shall be installed to accommodate the handicapped. A Type "A" Ramp shall be installed in accordance with I.D.O.T. Standard Detail 424001-001, or the detail shown on the plan. Color of truncated domes shall be contrasting with the adjacent surface. Contractor to coordinate color with owner prior to ordering truncated dome panels.

43. CONCRETE PAVEMENT. The contractor will need to provide a grid spacing layout for approval by the engineer.

 The curing requirements should follow Section 1022.01, (b) with fugitive dye as noted in the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition. Sealers should follow Section 1026 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

 Joint sealing shall follow Section 1058 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

 The concrete curb shall be tied to the concrete pavement. Use No. 6, 30" long bar at 48" O.C. Alternatively the curb can be poured monolithically with the concrete pavement.

44. SIDEWALKS. Unless otherwise shown on the plans, the proposed sidewalks in front of the site shall be constructed when the site work is substantially complete.

 ALL PUBLIC AND PRIVATE SIDEWALKS SHALL BE CONSTRUCTED WITH A MAXIMUM RUNNING SLOPE OF NO GREATER THAN 1:20 (FT/FT) – 5% GRADIENT

 All materials shall meet the requirements of the "Standard Specifications for Road and Bridge Construction" of the Illinois Department of Transportation. Concrete shall be at least a six (6) bag mix, 4% to 6% air entrained, and shall have a slump of no less than two (2") inches nor more than four (4") inches. Fiberglass reinforced additives shall be used on all sidewalks extending through driveways. Sidewalks shall be placed on a minimum of four (4") inches of CA-6 crushed stone or Grade 9 compactable crushed stone. Driveway crossings for sidewalks shall be 6" P.C.C. with (4") inches of CA-6 crushed stone or Grade 9 compactable crushed stone.

 Pre-molded bituminous expansion joints one-half (1/2") inch thick shall be placed every 50 feet minimum and one-half (1/2") inch thick between the sidewalk and all structures, which extend through the sidewalk. Control joints shall be on five (5') foot centers.

 The side edges of the sidewalk shall have rounded edges and the surface shall be "broom" finished.

 Protection and Curing: All exposed surfaces of concrete shall be protected against rain. The concrete shall be cured for a minimum period of three days after placing by one of the following methods:

 Wet burlap

 Impervious paper

 Membrane curing compound

 When the temperature of the air is expected to drop below 40 degrees F. within 24 hours placing the concrete shall be protected with nine inches of loose, dry straw and a layer of burlap other acceptable material, for a period of at least five days.

45. The concrete sealer, in addition to conforming with the referenced Standard Specification section, shall be selected from the current IDOT approved product list for Plural Component Concrete Sealers, or equal. The concrete sealer must dry to a clear finish. All exterior concrete surfaces as well as the segmental block retaining wall shall be sealed. The contractor shall provide documentation from the sealant provider, segmental block wall supplier and concrete pavement supplier noting the sealer is compatible with all exterior concrete surfaces that it is to be applied to. Contractor to also provide cut sheets of the desired sealer to the engineer for approval prior to ordering.

46. All surplus soil that will need to be hauled and disposed of offsite will need to be certified that it is not contaminated as defined under 415 ILCS 5/3.160 and any fees, taxes, surcharges charged by or through the operator(s) of clean construction or demolition debris (CCDD) or uncontaminated soil fill operations for the acceptance of uncontaminated soil shall be paid for by the contractor and those fees included in their bid price.

47. INFILTRATION BASIN SOIL LAYERS:
 There shall be three layers within the bottom of the infiltration basin. There will be a top compost-topsoil layer, engineered soil media, and bottom native sand / gravel layer. The layers shall conform with the Crystal Lake Watershed Stormwater Management Design Manual. The topsoil-comppost layer shall be a minimum of 8-inches thick and shall conform to the specifications listed below. The Engineered Filtration Media shall be one foot thick and the media shall conform be AASHTO-M-6 or ASTM-C-33 sand (0.02 tp 0.04 inch diameter. An engineered filtration fabric shall be placed between the native soil and the engineered filtration media and between the engineered filtration media and the topsoil-compost layer. The engineered fabric shall meet the specifications listed below.

48. UNDERDRAIN SOIL LAYERS:
 The soil layers shall conform with the same specifications as the infiltration basin soil layers.

49. HDPE WATER SERVICE PIPE:
 HDPE water service pipe shall conform to ATM D2447, D3350, F714 and D2513. Pipe shall comply with AWWA C901 for HDPE pipe being used as water service lines.

50. It is the intent to recycle the bituminous grindings and existing parking lot aggregate base for re-use as structural fill and/or aggregate base course. Contractor to coordinate with on-site geo-technical engineer to verify usability of re-use material as aggregate base course.

Topsoil-Compost Layer	
The surface layer shall be a minimum of an 8-inch thick layer that conforms with the following:	
Partical Size	98% passing 0.75 inch sieve
Physical Comtamants	No glass, metal or plastic
Mixture	50% Compost 40% Sand 10% Topsoil
pH	6-8
Moisture Content	No more than 40% by weight
Compost	Resistant to further degredation
Fecal Coliform	<1000 Most Probable number/gram of total solids
Metals	As<40ppm Cd<40ppm Pb<1000ppm Hg<100ppm Zn<2800ppm Fe<20,000-40,000ppm

FILTER FABRIC MATERIAL REQUIREMENTS

Geotextile Property	Value	Test Method
Grab Tensile Strength, N	800 min.	ASTM D4632
Puncture Strength, N	300 min.	ASTM D4833
Apparent Breaking Elongation, Percent	30 min.	ASTM D4632
Apparent Opening Size, µm	300 max.	ASTM D4751
Permittivity, S-1	1.35 min.	ASTM D4491

TAG EXPLANATION LEGEND:

EXAMPLE 1 (SANITARY & STORM MANHOLES):
SAN MAN TA 4' DIA TIF CL =
PROPOSED SANITARY MANHOLE, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID

EXAMPLE 2 (STORM SEWER, SANITARY SEWER, WATERMAIN):
120 LIN FT SAN SEWER MAIN 6" =
PROPOSED 120 LINEAL FEET SANITARY SEWER 6"

CB TA 4' DIA T11 F&G =
EXAMPLE 3 (STORM CATCH BASINS):
PROPOSED CATCH BASIN, TYPE A, 4' DIAMETER, TYPE 11 FRAME & GRATE

PRC CONC FES 15 =
EXAMPLE 4 (STORM FLARED END SECTIONS):
PROPOSED PRECAST CONCRETE FLARED END SECTION 15"

SYMBOL LEGEND

EXISTING — PROPOSED

SANITARY MANHOLE
STORM MANHOLE
STORM CATCH BASIN/INLET
INLET
FLARED END SECTION
DRY WELL
VALVE VAULT
FIRE HYDRANT
LIGHT POLE
STREET SIGN
REGULATORY SIGN
UTILITY POLE
UTILITY BOX
MAILBOX
WELL
STORM SEWER
SANITARY SEWER
CULVERT
WATER MAIN
WATER MAIN ENCASEMENT
SANITARY FORCE MAIN
STORM UNDERDRAIN
ELECTRIC LINE
TELEPHONE LINE
GAS LINE
CABLE TV LINE
TREE LINE
TREE
CONTOURS
FENCE
STONE RIP RAP
EROSION CONTROL FENCE (QUANTITY SPECIFIED PER PLANS)
DRAINAGE DIRECTION ARROW
10-100 YEAR OVERFLOW DIRECTION ARROW

THE SPECIFICATIONS ON THIS SHEET ARE IN CONJUNCTION WITH THE SPECIFICATIONS OUTLINED IN THE PROJECT MANUAL. THE INTENT IS FOR THE SPECIFICATIONS TO WORK TOGETHER AND IF AN DISCREPANCIES ARISE BETWEEN SPECIFICATION THE CONTRACTOR SHALL BRING IT TO THE ATTENTION OF THE ENGINEER. FINAL DETERMINATION AS TO WHICH SPECIFICATION WILL PREVAIL WILL BE DETERMINED BY THE ENGINEER.

MPL
JFV

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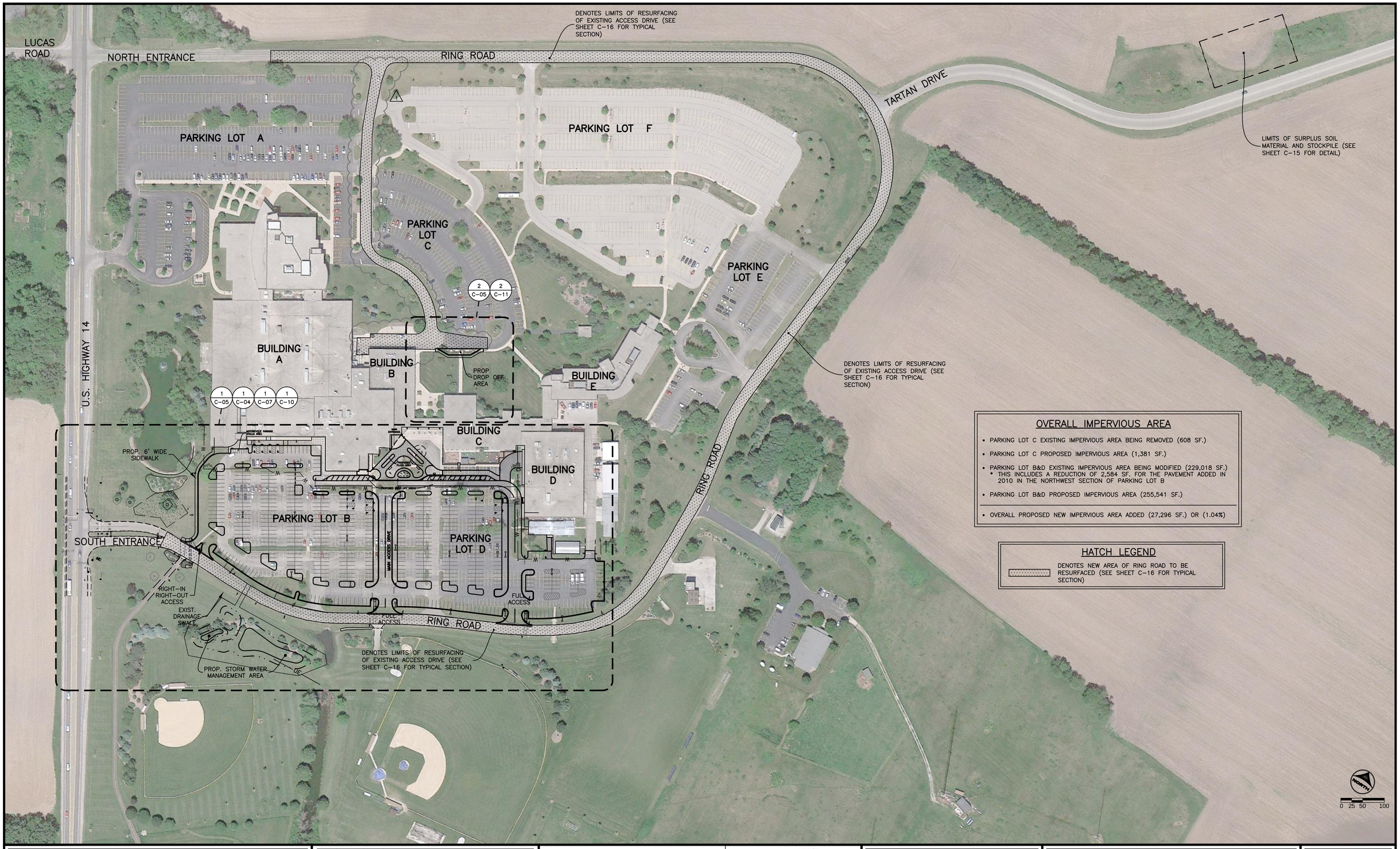
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
GENERAL NOTES

SHEET NO.
C-02



OVERALL IMPERVIOUS AREA

- PARKING LOT C EXISTING IMPERVIOUS AREA BEING REMOVED (608 SF.)
- PARKING LOT C PROPOSED IMPERVIOUS AREA (1,381 SF.)
- PARKING LOT B&D EXISTING IMPERVIOUS AREA BEING MODIFIED (229,018 SF.)
  * THIS INCLUDES A REDUCTION OF 2,584 SF. FOR THE PAVEMENT ADDED IN 2010 IN THE NORTHWEST SECTION OF PARKING LOT B
- PARKING LOT B&D PROPOSED IMPERVIOUS AREA (255,541 SF.)
- OVERALL PROPOSED NEW IMPERVIOUS AREA ADDED (27,296 SF.) OR (1.04%)

HATCH LEGEND

DENOTES NEW AREA OF RING ROAD TO BE RESURFACED (SEE SHEET C-16 FOR TYPICAL SECTION)

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PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
OVERALL CAMPUS SITE PLAN

SHEET NO.
C-03

SIGN LEGEND:

SIGN LOCATION AS NOTED ON PLAN

1. DENOTES "STOP" R1-1, 30" X 30" (TYP.)
2. DENOTES "HANDICAPPED PARKING" R7-8, 12" X 18" (TYP.) DENOTES "$250 FINE" R7-1101 6" X 12" (TYP.)
3. DENOTES "DO NOT ENTER" R5-1, 30" X 30" (TYP.)
4. DENOTES "NO LEFT TURN" R3-2, 30" X 30" (TYP.)
5. DENOTES "RIGHT TURN ONLY" R3-5R, 24" X 30"
6. DENOTES "STOP FOR PEDESTRIAN CROSSING" R1-6a, 12" X 36"
7. DENOTES "TRAFFIC FROM RIGHT DOES NOT STOP" 12" X 18" (TYP.)
8. DENOTES "TRAFFIC FROM LEFT DOES NOT STOP" 12" X 18" (TYP.)
9. DENOTES "CAMPUS SECURITY VEHICLES ONLY" 12" X 18" (TYP.)
10. DENOTES "SCOOTER, MOTORCYCLE PARKING ONLY" "ARROW RIGHT" 12" X 18" (TYP.)
11. DENOTES "SCOOTER, MOTORCYCLE PARKING ONLY" "ARROW LEFT" 12" X 18" (TYP.)

- PARKING LOT B&D EXISTING IMPERVIOUS AREA BEING MODIFIED (229,018 SF.)
  *THIS INCLUDES A REDUCTION OF 2,584 SF. FOR THE PAVEMENT ADDED IN 2010 IN THE NORTHWEST SECTION OF PARKING LOT B
- PARKING LOT B&D PROPOSED IMPERVIOUS AREA (255,541 SF.)

PROJECT NOTES:

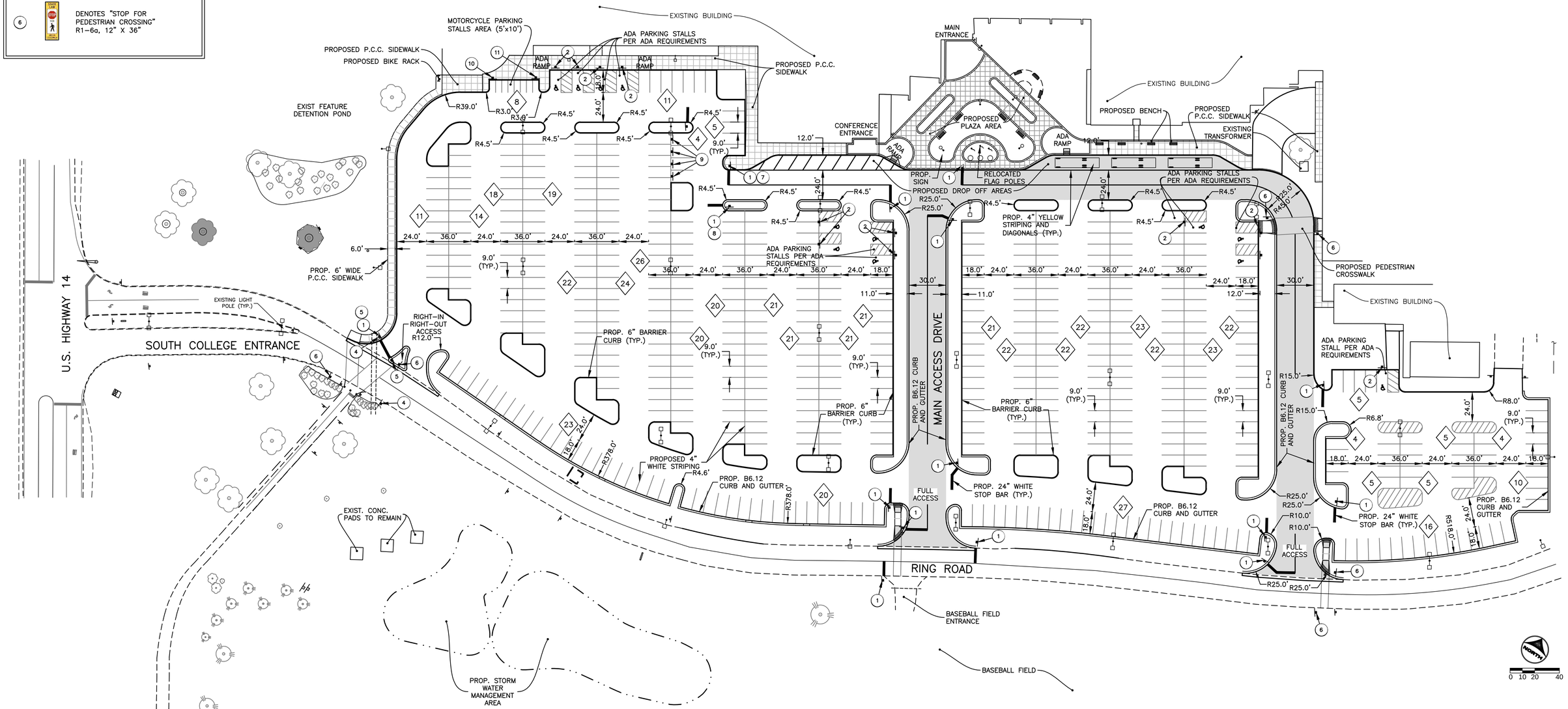
* CONTRACTOR TO COORDINATE W/ COLLEGE PRIOR TO CLOSING ANY PORTIONS OF THE PARKING LOT.
* ALL CONSTRUCTION FOR UTILITIES AND STREET/PARKING LOTS SHOULD BE DONE IN ACCORDANCE WITH CITY OF CRYSTAL LAKE STANDARD SPECIFICATION .
* ALL CONCRETE CURB SHALL BE 6" BARRIER UNLESS OTHERWISE NOTED ON THE PLANS.
* ALL PAVEMENT DIMENSIONS ARE MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
* ALL PAVEMENT RADII ARE 5.0' RADIUS MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
* ALL CURB ADJOINING SIDEWALKS SHALL BE DOWELED INTO THE CURB.

HATCH LEGEND

- DENOTES NEW STANDARD PAVEMENT SECTION
- DENOTES NEW HEAVY DUTY PAVEMENT SECTION
- DENOTES REVERSE (SPILLING) CURB & GUTTER
- DENOTES CONCRETE CURB & GUTTER (CATCHING)
- DENOTES AREA OF DEPRESSED CURB AND GUTTER.
- DENOTES PROP. SIDEWALK
- DENOTES AREA OF DEPRESSED SIDEWALK
- DENOTES AREA TO UTILIZE TRUNCATED DOMES

PARKING DATA:

* NUMBER OF REGULAR PARKING STALLS: 565
* NUMBER OF ADA STALLS: 12
* NUMBER OF MOTORCYCLE STALLS: 8
* NUMBER OF CAMPUS SECURITY VEHICLE STALLS: 4
* TOTAL NUMBER OF STALLS: 589
* TOTAL NUMBER OF EXIST. STALLS: 595
* TYPICAL PARKING WIDTH: 9.0'
* TYPICAL PARKING LENGTH: 18.0'
* TYPICAL ISLE WIDTH: 24'



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McHenry County College

McHENRY COUNTY COLLEGE PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL

DETAIL SITE PLAN

SHEET NO. C-04

LEGEND

- INDICATES HMA PAVEMENT REMOVAL (FULL DEPTH) (SEE SHEET C-06 FOR QUANTITY)
- INDICATES CONCRETE REMOVAL (FULL DEPTH) (SEE SHEET C-06 FOR QUANTITY)
- INDICATES STAGING AREA
- INDICATES EROSION CONTROL MEASURES (LIMITS OF GRADING)
- BF — INDICATES EROSION CONTROL MEASURE (SEE SHEET C-13 FOR EROSION CONTROL LEGEND)
- INDICATES TREE AND BRUSH TO BE PROTECTED
- TR-# — INDICATES TREE AND BRUSH REMOVAL (SEE SHEET C-06 FOR SIZE AND QUANTITY)
- RST-# — INDICATES STORM SEWER REMOVAL, ABANDONED OR ADJUSTMENT (SEE SHEET C-06 FOR SIZE AND QUANTITY)
- RSN-# — INDICATES SANITARY SEWER REMOVAL, ABANDONED OR ADJUSTMENT (SEE SHEET C-06 FOR SIZE AND QUANTITY)
- R-# — INDICATES MISC. REMOVAL ITEMS (SEE SHEET C-06 FOR SIZE AND QUANTITY)
- DENOTES EXIST. CONCRETE CURB & GUTTER TO BE REMOVED

PROJECT NOTES:

* NO LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES, IN ADDITION TO, NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. (INCLUDING STORM WATER POLLUTION PREVENTION PLAN PER THE DEVELOPMENT CRITERIA.) SEE SHEET C-13-C-05&C-10 FOR EROSION CONTROL MEASURES)
* ALL EXISTING UTILITIES TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
* CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL UTILITY COMPANIES INVOLVED IN PROJECT AND PAY ALL REQUIRED FEES AND COSTS.
* ALL STRUCTURES & DEBRIS SHALL BE REMOVED PRIOR TO CONSTRUCTION & DISPOSED OF OFFSITE.
* ANY EXISTING FIELD DRAIN TILES ENCOUNTERED SHALL BE RECONNECTED OR CONNECTED TO THE NEAREST STORM SEWER.
* ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
* CONTRACTOR TO KEEP ACCESS DRIVE OPEN AT ALL TIMES WITH MINOR CLOSINGS ALLOWED FOR PAVING ACTIVITIES.
* THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR ITO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.

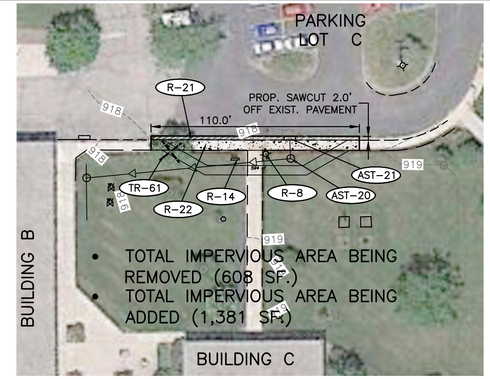
STAGING NOTE:

(STAGING SUBJECT TO CHANGES PER SITE CONTRACTORS SCHEDULE AND METHODS OF OPERATION)

1. EROSION CONTROL MEASURES AND STOCKPILE STAGING
2. CONSTRUCTION ENTRANCES
3. PLAN REMOVALS
4. PROPOSED UNDERGROUND
5. GRADING
6. PAVING
7. TOPSOIL RESPREAD/SEED

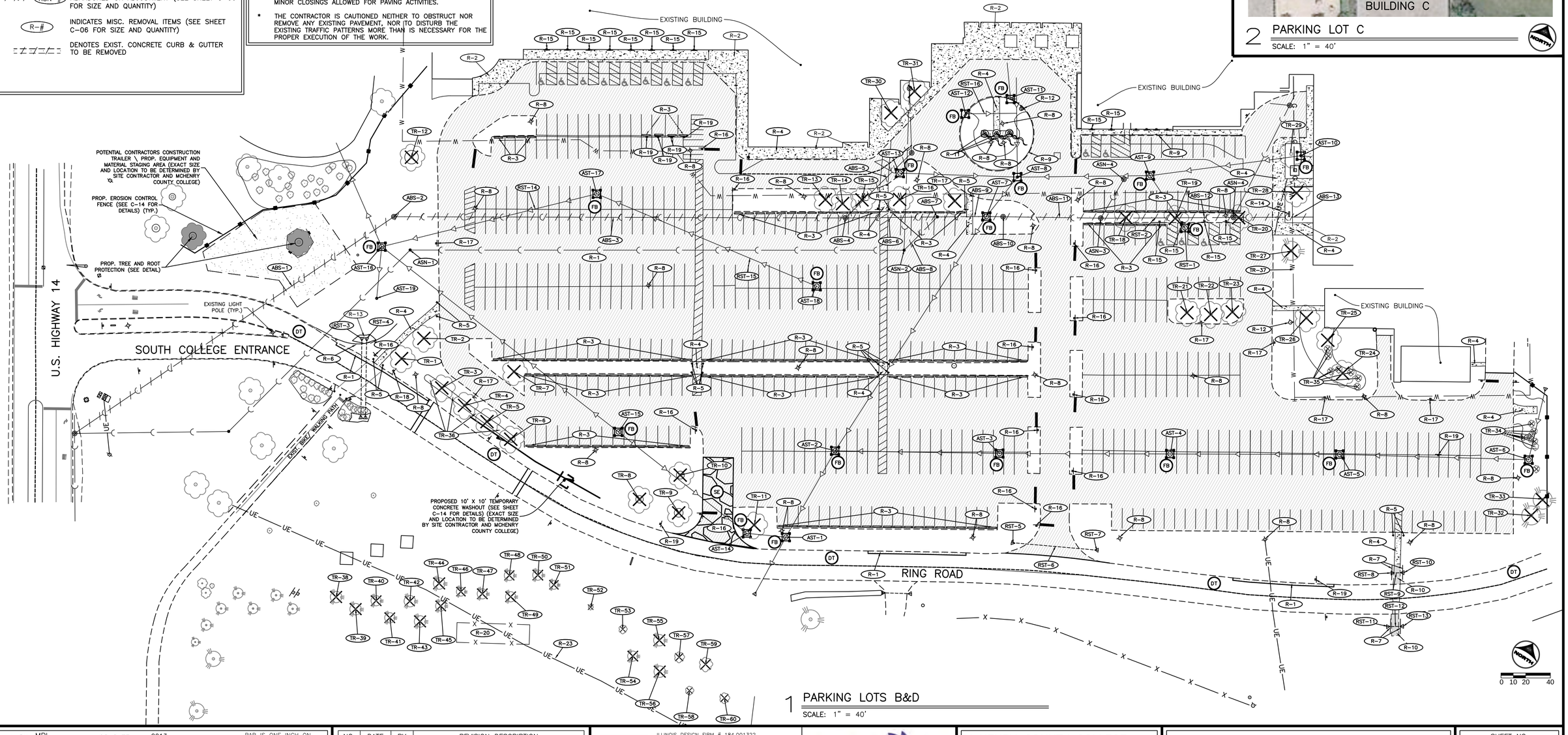
NOTES:

- MCHENRY COUNTY COLLEGE (MCC) SHALL BE NOTIFIED OF ALL NON IDENTIFIED UNDERGROUND UTILITIES OR CONDUITS DISCOVERED DURING CONSTRUCTION. IF ANY OF THE UTILITY OR CONDUITS NEED TO BE REPAIRED, PLUGGED, REROUTED AND OR ABANDONED IN PLACE, IT SHALL TAKE PLACE PER THE DIRECTION OF THE MCC.
- ALL AREAS SHALL BE RESTORED WITH 6" TOPSOIL AND CLASS 1A SEED, MULCH METHOD #_____
- TEMPORARY STOCKPILE AREA LOCATION AND SIZE SHALL BE COORDINATED BY SITE CONTRACTOR AND MCHENRY COUNTY COLLEGE (SEE SHEET C-14 FOR DETAIL)



2 PARKING LOT C

SCALE: 1" = 40'



1 PARKING LOTS B&D

SCALE: 1" = 40'

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PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

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PHASE 1 – EROSION CONTROL AND DEMOLITION PLAN FOR LOTS B, D &C

SHEET NO.
C-05

REMOVALS / RELOCATES / ADJUSTMENTS – MISCELLANEOUS

NUMBER	DESCRIPTION	QUANTITY	UNITS	REMARKS
R–1	HMA PAVEMENT REMOVAL	24,274	S.Y.	REMOVE PAVEMENT AREA AS HATCHED ON PLAN
R–2	CONCRETE BENCHES, PLANTERS AND MISC. CONCRETE REFUSE CONTAINERS	1	L. SUM.	VERIFY WITH OWNER ON DIRECTION FOR REMOVALS
R–3	CONCRETE PARKING BUMBERS	183	EA.	CONTACTOR TO SAVE APPROXIMATELY 20 PARKING BLOCKS AND REMAINING TO BE DISPOSED OF (VERIFY WITH OWNER ON DIRECTION FOR REMOVALS) CONTACTOR TO SAVE APPROXIMATELY 20 PARKING BLOCKS AND REMAINING TO BE DISPOSED OF (VERIFY WITH OWNER ON DIRECTION FOR REMOVALS)
R–4	CONCRETE	1,524	S.Y.	REMOVE PAVEMENT AREA AS HATCHED ON PLAN
R–5	BOLLARDS	17	EA.	
R–6	GUARDRAIL	73	LIN. FT	
R–7	HANDRAIL	48	LIN. FT	
R–8	LIGHTPOLE AND FOUNDATIONS	26	EA.	
R–9	CURB REMOVAL	364	LIN. FT	
R–10	AGGREGATE REMOVAL	E	S.Y.	
R–11	FLAG POLE	3	EA.	REMOVE AND RELOCATE PER SITE PLAN
R–12	FIRE HYDRANT W AUX VALVE	2	EA.	REMOVE AND RELOCATE PER UTILITY PLAN
R–13	RIPRAP REMOVAL	10	S.Y.	REMOVE AND RELOCATE PER EROSION PLAN
R–14	BUILDING MONUMENT SIGN	2	EA.	REMOVE AND RELOCATE PER SITE PLAN
R–15	ADA SIGNS	14	EA.	REMOVE AND RELOCATE PER SITE PLAN
R–16	STOP SIGNS	14	EA.	REMOVE AND RELOCATE PER SITE PLAN
R–17	NO PARKING SIGNS	6	EA.	REMOVE AND RELOCATE PER SITE PLAN
R–18	BICYCLE WARNING WITH ARROW	1	EA.	REMOVE AND RELOCATE PER SITE PLAN
R–19	MISC. SIGNS	7	EA.	REMOVE AND RELOCATE PER SITE PLAN
R–20	BATTING CAGES	1	L. SUM.	VERIFY WITH OWNER ON DIRECTION FOR REMOVALS
R–21	HMA PAVEMENT REMOVAL	22	S.Y.	PARKING LOT C – REMOVE PAVEMENT AREA AS HATCHED ON PLAN
R–22	CONCRETE SIDEWALK	59	S.Y.	PARKING LOT C – REMOVE PAVEMENT AREA AS HATCHED ON PLAN
R–23	ELECTRICAL RELOCATE	1	L. SUM.	

REMOVALS / RELOCATES / ADJUSTMENTS – SANITARY SEWER

NUMBER	DESCRIPTION	QUANTITY	UNITS	REMARKS
ABS–1	SANITARY SEWER – 8" CLAY PIPE	312	LIN. FT.	PREVIOUSLY ABANDONED SANITARY SEWER PIPE
ABS–2	SANITARY STRUCTURE – MANHOLE	1	EA.	PREVIOUSLY ABANDONED SANITARY MANHOLE
ABS–3	SANITARY SEWER – 8" CLAY PIPE	366	LIN. FT.	PREVIOUSLY ABANDONED SANITARY SEWER PIPE
ABS–4	SANITARY STRUCTURE – MANHOLE	1	EA.	PREVIOUSLY ABANDONED SANITARY MANHOLE
ABS–5	SANITARY SEWER – 8" CLAY PIPE	70	LIN. FT.	PREVIOUSLY ABANDONED SANITARY SEWER PIPE
ABS–6	SANITARY SEWER – 8" CLAY PIPE	74	LIN. FT.	PREVIOUSLY ABANDONED SANITARY SEWER PIPE
ABS–7	SANITARY CLEAN OUT	1	EA.	CLEANOUT TO BE CUT BELOW SUBGRADE, ABANDONED IN PLACE, AND SHALL BE FILLED WITH FLOWABLE FILL IN ACCORDANCE WITH ARTICLE 1019 OF THE IDOT STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
ABS–8	SANITARY SEWER – 8" CLAY PIPE	38	LIN. FT.	SANITARY SEWER PIPE TO BE ABANDONED IN PLACE, PIIPE SHALL BE FILLED WITH FLOWABLE FILL IN ACCORDANCE WITH ARTICLE 1019 OF THE IDOT STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
ABS–9	SANITARY SEWER – 8" CLAY PIPE	53	LIN. FT.	SANITARY SEWER PIPE TO BE ABANDONED IN PLACE, PIIPE SHALL BE FILLED WITH FLOWABLE FILL IN ACCORDANCE WITH ARTICLE 1019 OF THE IDOT STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
ABS–10	SANITARY STRUCTURE – MANHOLE	1	EA.	MANHOLE TO BE ABANDONED IN PLACE SHALL HAVE THE TOP CONE SECTION REMOVED AND REMAINING STRUCTURE FILLED WITH TRENCH BACKFILL AND COMPACTED PER SPECIFICATIONS.
ABS–11	SANITARY SEWER – 8" CLAY PIPE	79	LIN. FT.	SANITARY SEWER PIPE TO BE ABANDONED IN PLACE, PIIPE SHALL BE FILLED WITH FLOWABLE FILL IN ACCORDANCE WITH ARTICLE 1019 OF THE IDOT STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
ABS–12	SANITARY SEWER – 8" CLAY PIPE	107	LIN. FT.	SANITARY SEWER PIPE TO BE ABANDONED IN PLACE, PIIPE SHALL BE FILLED WITH FLOWABLE FILL IN ACCORDANCE WITH ARTICLE 1019 OF THE IDOT STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
ABS–13	SANITARY SEWER – 8" CLAY PIPE	64	LIN. FT.	SANITARY SEWER PIPE TO BE ABANDONED IN PLACE, PIIPE SHALL BE FILLED WITH FLOWABLE FILL IN ACCORDANCE WITH ARTICLE 1019 OF THE IDOT STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
ASN–1	SANITARY STRUCTURE – CLEANOUT	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
ASN–2	SANITARY STRUCTURE – CLEANOUT	1	EA.	CLEANOUT RIM ADJUSTMENT. SEE GRADING PLAN. NE INVERT (ABS–8) SHALL BE PLUGGED ONCE THE NEW SYSTEM IS BROUGHT ONLINE. INVERT SHALL BE DISCONNECTED AND CAPPED SHUT.
ASN–3	SANITARY STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT. SEE GRADING PLAN. SW INVERT (ABS–11) AND NE INVERT (ABS–12) SHALL BE PLUGGED ONCE THE NEW SYSTEM IS BROUGHT ONLINE. INVERT SHALL BE BRICK AND MORTARED SHUT.
ASN–4	SANITARY STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT. SEE GRADING PLAN. SW INVERT (ABS–12) AND NE INVERT (ABS–13) SHALL BE PLUGGED ONCE THE NEW SYSTEM IS BROUGHT ONLINE. INVERT SHALL BE BRICK AND MORTARED SHUT.

REMOVALS / RELOCATES / ADJUSTMENTS – STORM SEWER

NUMBER	DESCRIPTION	QUANTITY	UNITS	REMARKS
RST–1	STORM STRUCTURE – MANHOLE	1	EA.	
RST–2	STORM SEWER – 8" RCP PIPE	24	LIN. FT.	
RST–3	STORM SEWER – 36" FES	1	EA.	
RST–4	STORM SEWER – 36" FES	1	EA.	
RST–5	STORM SEWER – 18" FES	1	EA.	
RST–6	STORM SEWER – 18" CMP PIPE	70	LIN. FT.	
RST–7	STORM SEWER – 18" FES	1	EA.	
RST–8	STORM SEWER – 18" FES	1	EA.	
RST–9	STORM SEWER – 18" CMP PIPE	11	LIN. FT.	
RST–10	STORM SEWER – 18" FES	1	EA.	
RST–11	STORM SEWER – 18" FES	1	EA.	
RST–12	STORM SEWER – 18" CMP PIPE	11	LIN. FT.	
RST–13	STORM SEWER – 18" FES	1	EA.	
AST–1	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–2	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–3	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–4	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–5	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–6	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–7	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–8	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–9	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–10	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–11	STORM STRUCTURE – INLET	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–12	STORM STRUCTURE – INLET	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–13	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–14	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–15	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–16	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–17	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–18	STORM STRUCTURE – MANHOLE	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–19	STORM STRUCTURE – DRYWELL	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–20	STORM STRUCTURE – DRYWELL	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN
AST–21	STORM STRUCTURE – DRYWELL	1	EA.	MANHOLE RIM ADJUSTMENT, SEE GRADING PLAN

TREE AND BRUSH REMOVAL

NO.	SIZE	NOTES
TR–1	6	DECIDUOUS TREE
TR–2	4	DECIDUOUS TREE
TR–3	10	DECIDUOUS TREE
TR–4	6	DECIDUOUS TREE
TR–5	6	DECIDUOUS TREE
TR–6	3	DECIDUOUS TREE
TR–7	4	DECIDUOUS TREE
TR–8	14	DECIDUOUS TREE
TR–9	12	DECIDUOUS TREE
TR–10	10	DECIDUOUS TREE
TR–11	8	DECIDUOUS TREE
TR–12	18	DECIDUOUS TREE
TR–13	4	DECIDUOUS TREE
TR–14	2	DECIDUOUS TREE
TR–15	4	DECIDUOUS TREE
TR–16	8	DECIDUOUS TREE
TR–17	6	DECIDUOUS TREE
TR–18	15	DECIDUOUS TREE
TR–19	10	DECIDUOUS TREE
TR–20	10	DECIDUOUS TREE
TR–21	8	DECIDUOUS TREE
TR–22	8	DECIDUOUS TREE
TR–23	15	DECIDUOUS TREE
TR–24	8	DECIDUOUS TREE
TR–25	8	DECIDUOUS TREE
TR–26	6	DECIDUOUS TREE
TR–27	18	EVERGREEN TREE
TR–28	10	DECIDUOUS TREE
TR–29	15	DECIDUOUS TREE
TR–30	6	DECIDUOUS TREE
TR–31	8	DECIDUOUS TREE
TR–32	18	EVERGREEN TREE
TR–33	18	EVERGREEN TREE
TR–34		MISC. SHRUBS, BUSHSES AND ASSOCIATED LANDSCAPING
TR–35		MISC. SHRUBS, BUSHSES AND ASSOCIATED LANDSCAPING
TR–36		MISC. SHRUBS, BUSHSES AND ASSOCIATED LANDSCAPING
TR–37		MISC. SHRUBS, BUSHSES AND ASSOCIATED LANDSCAPING
TR–38	18	EVERGREEN TREE
TR–39	18	EVERGREEN TREE
TR–40	16	EVERGREEN TREE
TR–41	16	EVERGREEN TREE
TR–42	18	EVERGREEN TREE
TR–43	18	EVERGREEN TREE
TR–44	18	EVERGREEN TREE
TR–45	16	EVERGREEN TREE
TR–46	14	EVERGREEN TREE
TR–47	16	EVERGREEN TREE
TR–48	16	EVERGREEN TREE
TR–49	16	EVERGREEN TREE
TR–50	16	EVERGREEN TREE
TR–51	14	EVERGREEN TREE
TR–52	3	DECIDUOUS TREE
TR–53	10	DECIDUOUS TREE
TR–54	16	EVERGREEN TREE
TR–55	18	EVERGREEN TREE
TR–56	18	EVERGREEN TREE
TR–57	12	DECIDUOUS TREE
TR–58	10	DECIDUOUS TREE
TR–59	16	DECIDUOUS TREE
TR–60	12	DECIDUOUS TREE
TR–61	16	DECIDUOUS TREE

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PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
DEMOLITION QUANTITIES

SHEET NO.
C–06

UTILITY NOTES:

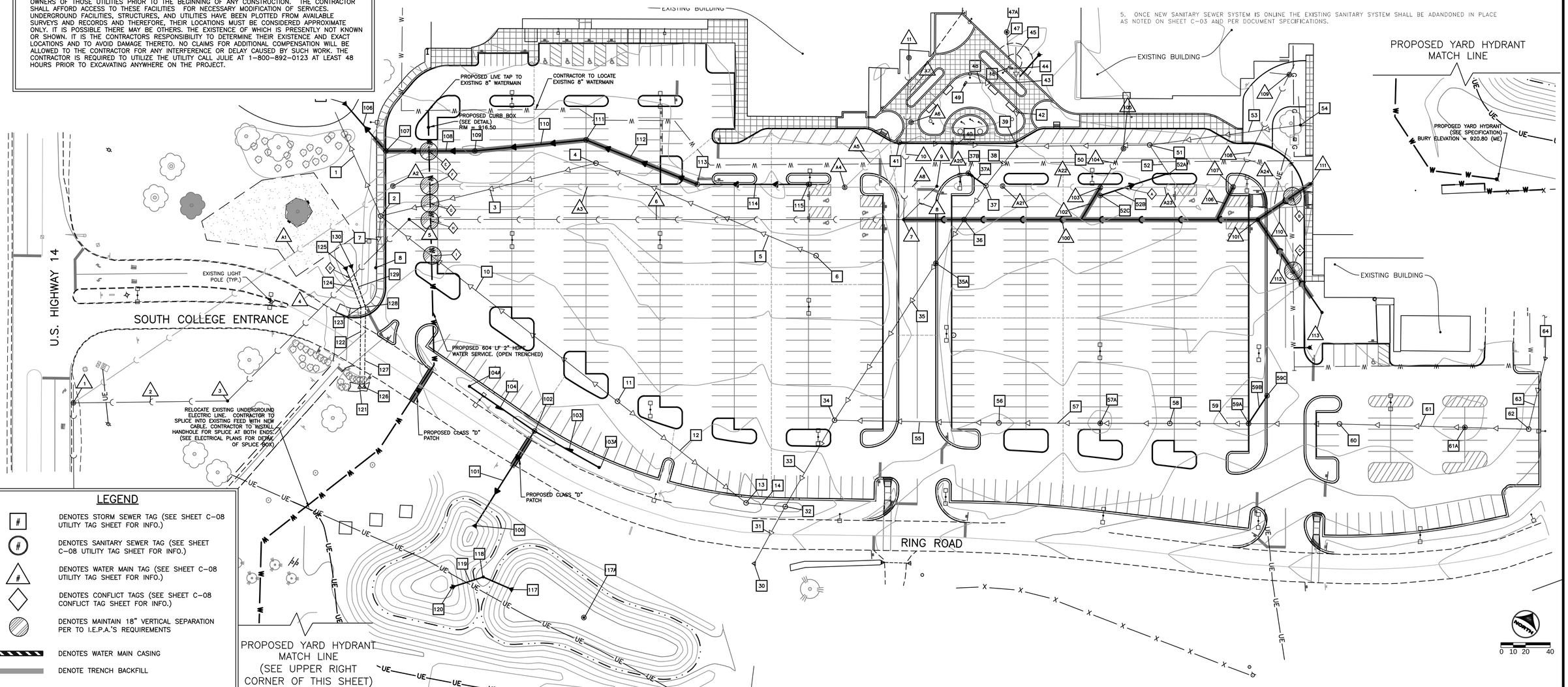
1. SEE SHEET C-08 FOR UTILITY TAGS)
2. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, GREASE TRAP REQUIREMENTS/DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE UTILITY SERVICE SIZES ARE TO BE DETERMINED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND ENSURE PROPER DEPTHS ARE ACHIEVED. THE JURISDICTION UTILITY REQUIREMENTS SHALL ALSO BE MET, AS WELL AS COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE SAME.
3. FIELD VERIFY ELEVATIONS AND LOCATIONS OF ALL CONNECTIONS TO EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
4. PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETE.
5. MAINTAIN A MINIMUM OF 6.0' COVER OVER ALL WATER MAINS.
6. ADJUST ALL MANHOLES AND FRAMES TO FINISHED GRADES.
7. ALL SANITARY SEWER AND WATER SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF CRYSTAL LAKE PLUMBING CODE.
8. 18" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY/STORM SEWER AND WATER MAIN. (PER E.P.A. STANDARDS)
9. MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND PUBLIC WATER MAINS. (PER E.P.A. STANDARDS)
10. WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS. THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK. THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY CALL JULIE AT 1-800-892-0123 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
11. LOCATION OF SITE UTILITIES SHALL BE VERIFIED WITH PROPER UTILITY COMPANY PROVIDING SERVICE.
12. SEE TYPICAL TRENCH CROSS SECTION DETAIL ON SHEET C-16 FOR BACKFILLING AND COMPACTION REQUIREMENTS.
13. FOR EXACT LIGHT POLE LOCATIONS SEE PHOTOMETRICS PLAN
14. MATERIAL PERMITTED FOR USE AS SANITARY SEWER PIPES IS PVC DR 26 FOR 6".
15. ALL SANITARY SEWER CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE CITY OF CRYSTAL LAKE PUBLIC WORKS.
16. ALL CONNECTIONS TO PUBLIC SANITARY MANHOLES SHALL BE CORE DRILLED.
17. ALL STORM DRAINAGE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF CRYSTAL LAKE.
18. ALL FIELD TILES ENCOUNTERED SHALL BE REPLACED AND/OR CONNECTED TO THE STORM SEWER SYSTEM AND LOCATED AND IDENTIFIED ON THE RECORD PLANS BY THE CONTRACTOR.
19. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
20. PROVIDE UNDERDRAINS FROM SEEPS OR SPRINGS ENCOUNTERED. EXTEND TO STORM SEWER SYSTEM OR DAYLIGHT AT THE BOTTOM OF THE THE FILL SLOPE
21. ALL PROPOSED PIPE CONNECTIONS TO EXISTING OR PROPOSED MANHOLES SHALL CONFORM TO ASTM-C923.
22. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
23. GENERAL CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.
24. ALL BUILDING UTILITY SERVICE LOCATIONS TO BE VERIFIED PRIOR TO CONSTRUCTION.
25. ALL EXISTING UTILITIES TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
26. CONTRACTOR TO LOCATE ANY ELECTRIC LINES SERVICING SURROUNDING PARKING LOT LIGHTING WITH IN THE AREA OF CONSTRUCTION PRIOR TO THE INSTALLATION OF SANITARY, STORM AND WATER MAIN PIPE.
27. CONTRACTOR TO SCHEDULE THE ROADWAY CROSSING AND TEMPORARY ROAD CLOSED SIGNS FOR THE MAIN ACCESS ROAD TO OCCUR DURING OFF PEAK HOURS. CONTRACTOR SHALL POST APPROPRIATE TRAFFIC CONTROL SIGNAGE PRIOR TO CLOSING THE ROADWAY.
28. THE EXISTING SANITARY SEWER MAIN FROM STRUCTURE 9 TO BUILDING D SHALL BE TELEVISED PRIOR TO INSTALLATION OF NEW MAIN TO IDENTIFY ANY UNKNOWN SERVICES. ANY SERVICES FOUND SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
29. CONTRACTOR TO COORDINATE W/ COLLEGE PRIOR TO CLOSING ANY PORTIONS OF THE PARKING LOT.
30. ALL SANITARY SEWER PIPE PROPOSED TO BE ABANDONED IN PLACE SHALL BE FILLED WITH FLOWABLE FILL IN ACCORDANCE WITH ARTICLE 1019 OF THE IDOT STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
31. ALL MANHOLES NOTED TO BE ABANDONED IN PLACE SHALL HAVE THE TOP CONE SECTION REMOVED AND REMAINING STRUCTURE FILLED WITH TRENCH BACKFILL AND COMPACTED PER SPECIFICATIONS.
32. THE EXISTING NORTHEAST INVERT OF STRUCTURE NO. 7 SHALL BE PERMANENTLY PLUGGED ONCE THE NEW SYSTEM IS BROUGHT ONLINE.

IT IS NOT INTENDED TO CONFINE THE CONTRACTOR'S ACTIVITIES TO THE AREAS OF SUGGESTED PHASING ALONE. IT IS UNDERSTOOD THAT SOME OF THE VARIOUS STEPS, THOUGH LISTED IN NUMERICAL ORDER MAY OCCUR SIMULTANEOUSLY. THE CONTRACTOR MAY CONDUCT SEVERAL OPERATIONS CONCURRENTLY, PROVIDED THAT TRAFFIC IS MAINTAINED AND THAT THESE OPERATIONS DO NOT CONFLICT WITH THE PHASING INDICATED HEREIN.

IT IS ALSO RECOGNIZED THAT AS THE VARIOUS ACTIVITIES RELATED TO CONSTRUCTION PROGRESS, CERTAIN SITUATIONS MAY ARISE WHICH WILL PRECLUDE ADHERING TO THE ORIGINAL CONSTRUCTION SEQUENCE OR WHICH WOULD READILY LEND THEMSELVES TO MORE EFFICIENT PHASING OPERATIONS. SHOULD THE CONTRACTOR DESIRE TO DEVIATE SUBMITTED TO THE OWNER/ENGINEER FOR APPROVAL.

PHASING PLAN:

1. COORDINATE WITH UTILITY COMPANIES TO RELOCATE OR ADJUST EXISTING UTILITY LINES WHERE CONFLICTS EXIST.
2. PROVIDE TEMPORARY TRAFFIC CONTROL SIGNAGE AND TEMPORARY PAVEMENT MARKINGS AS NECESSARY TO PROVIDE ACCESS TO/FROM THE MAIN ENTRANCE AND PARKING LOT.
3. CONTRACTOR SHALL MAINTAIN EXISTING SANITARY SERVICE TO COLLEGE AT ALL TIMES WITH THE EXPECTION OF COMPLETING THE SANITARY SERVICE BUILDING TIE INTO CLEANOUT #11 AS WELL AS CONNECTION TO EXISTING SANITARY MAIN AT STRUCTURE #9 SERVICE WILL BE ALLOWED TO BE INTERUPTED FOR THE INSTALLATION OF SANITARY PIPE #10. THE CONTRACTOR TO COORDINATE WITH THE COLLEGE PRIOR TO SERVICE INTERUPTION PROVIDED THAT THE CONTRACTOR SECURES THE APPROPRIATE TIMEFRAME TO PERFORM THE WORK AND BY-PASS PUMPING OR PUMPER TRUCK IS READILY AVAILABLE (IF REQUIRED).
4. CONTRACTOR SHALL INSTALL THE MAIN LINE SANITARY SEWER FIRST WHICH COMPRISES OF SANITARY SEWER PIPE #'S 100 AND 101 ALONG WITH THE INSTALLATION OF SANITARY MANHOLES #'S 101 PRIOR TO INSTALLING SANITARY SERVICE PIPE #102, 106, 110 AND 112 TO THE BUILDING. ALL NEW MAINS SHALL BE TESTED AND TELEVISED PRIOR TO CONNECTING TO STRUCTURE #9.
5. ONCE NEW SANITARY SEWER SYSTEM IS ONLINE THE EXISTING SANITARY SYSTEM SHALL BE ADANDONED IN PLACE AS NOTED ON SHEET C-03 AND PER DOCUMENT SPECIFICATIONS.



LEGEND

- # — DENOTES STORM SEWER TAG (SEE SHEET C-08 UTILITY TAG SHEET FOR INFO.)
- (#) — DENOTES SANITARY SEWER TAG (SEE SHEET C-08 UTILITY TAG SHEET FOR INFO.)
- △# — DENOTES WATER MAIN TAG (SEE SHEET C-08 UTILITY TAG SHEET FOR INFO.)
- ◇ — DENOTES CONFLICT TAGS (SEE SHEET C-08 CONFLICT TAG SHEET FOR INFO.)
- DENOTES MAINTAIN 18" VERTICAL SEPARATION PER TO I.E.P.A.'S REQUIREMENTS
- DENOTES WATER MAIN CASING
- DENOTE TRENCH BACKFILL

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CRYSTAL LAKE, ILLINOIS

CIVIL

UTILITY PLAN FOR LOT B & D

SHEET NO.
C-07

STORM SEWER TAGS

1 EXIST. 89 LIN FT SS RCP 12"

2 EXISTING STORM MANHOLE
TO REMAIN
WITH RESTRICTOR IN SE PIPE
EXIST. RIM=915.80
PROP. RIM=917.55
INV=911.85 S
INV=911.85 NW
INV=911.65 SE
INV=911.25 NE TO BE PLUGGED

3 EXIST. 174 LIN FT SS RCP 12"
TO BE ABANDONED IN PLACE

4 EXISTING STORM MANHOLE
TO BE ABANDONED IN PLACE
EXIST. RIM=914.97
INV=912.23 SE
INV=912.03 SW

5 EXIST. 189 LIN FT SS RCP 12"
TO BE ABANDONED IN PLACE

6 EXISTING STORM MANHOLE
TO BE ABANDONED IN PLACE
EXIST. RIM=915.46
INV=913.09 SW

7 EXIST. 38 LIN FT SS RCP 12"
TO BE REMOVED

8 EXISTING DRYWELL
TO BE REMOVED
EXIST. RIM=916.07
INV=911.54 NW
BOTTOM=904.47

9 OMITTED

10 EXIST. 240 LIN FT SS RCP 15"
TO BE REPAIRED (3 LOCATIONS)

11 EXISTING STORM MANHOLE
EXIST. RIM=915.38
PROP. RIM=916.10
INV=912.02 NW
INV=911.91 SE

12 EXIST. 128 LIN FT SS RCP 15"
TO REMAIN

13 EXISTING STORM MANHOLE
EXIST. RIM=914.77
PROP. RIM=914.55
INV=910.72 NW
INV=910.57 NE

14 EXIST. 26 LIN FT SS RCP 12"
TO REMAIN

30 EXIST. PRC FES ELLIPTICAL 48" EQ RS
INV=909.26

31 EXIST. 48 LIN FT SS RCP 48" EQ RS
TO REMAIN

32 EXISTING STORM MANHOLE
EXIST. RIM=915.03
PROP. RIM=914.85
INV=UNOBTAINABLE SW
INV=UNOBTAINABLE N
INV=UNOBTAINABLE S
BOTTOM=904.47

33 EXIST. 75 LIN FT SS RCP 36"
TO REMAIN

34 EXISTING STORM MANHOLE
EXIST. RIM=915.38
PROP. RIM=916.50
INV=912.02 SW
INV=UNOBTAINABLE N, NE

35 EXIST. 220 LIN FT SS RCP 36"
TO REMAIN

35A CB TA 5' DIA R-3281-A
TO BE CONSTRUCTED ONLINE
CONTRACTOR TO FIELD VERIFY INVERTS
BEFORE ORDERING STRUCTURE
T/C=916.54
INV=910.25 N, S ESTIMATED (FIELD VERIFY)

36 MANHOLE TA 5' DIA R-1713 SOLID LID
TO BE CONSTRUCTED ONLINE OVER STORM SEWER
CONTRACTOR TO FIELD VERIFY INVERTS
BEFORE ORDERING STRUCTURE
RIM=916.75
INV=910.30 N STORM
INV=910.30 S STORM
SAN INV = 911.12
INSTALL ONE FULL LENGTH OF SANITARY
SEWER PIPE THROUGH MANHOLE (NO JOINTS)
CORE AND BOOT SANITARY SEWER PIPE

37 EXISTING STORM MANHOLE
EXIST. RIM=917.65
PROP. RIM=916.30
INV=910.37 NE , SE
PROP INV=911.50 W TO BE CORED
PLUG EXISTING SANITARY SEWER PIPES

37A 14 LIN FT SS RCP 12"
@ 0.50%

37B CB TC R-3281-A
T/C=916.44
INV=911.57

38 EXIST. 37 LIN FT SS RCP 36"
TO REMAIN

39 EXISTING STORM MANHOLE
EXIST. RIM=917.67
PROP. RIM=916.80
INV=911.87 SW
INV=911.63 N,SW
INV=911.57 NE

40 EXIST. 90 LIN FT SS RCP 12"
TO REMAIN AND TO BE CLEANED

41 EXISTING STORM CATCH BASIN
EXIST. RIM=916.47
PROP. RIM=917.50
INV=912.55

42 EXIST. SS RCP 36"
TO REMAIN

43 EXISTING BLIND CONNECTION

44 EXIST. SS RCP 24"
TO REMAIN

45 EXIST. SS RCP 36"
TO REMAIN

46 EXISTING STORM CATCH BASIN
EXIST. RIM=916.44
NEW FRAME R-1713 SOLID LID
PROP. RIM=917.10
INV=911.29 NW,NE

47 EXIST. SS RCP 24"
TO REMAIN

47A CB TA 4' DIA R-2595-A
CONSTRUCTED ON-LINE OVER EXIST. 24" RCP
CONTRACTOR TO VERIFY INVERTS PRIOR
TO CONSTRUCTION
RIM=916.75
INV=911.35 NW
INV=911.31 SE

48 EXIST. SS RCP 12"
TO REMAIN AND BE REPAIRED 3 LOCATIONS

49 EXISTING STORM CATCH BASIN
EXIST. RIM=916.47
PROP. RIM=916.90
NEW FRAME R-2504-A TY D GRATE
INV=914.42

50 EXIST. 104 LIN FT SS RCP 18"
TO REMAIN

51 EXISTING STORM CATCH BASIN
EXIST. RIM=917.12
PROP. RIM=917.60
INV=912.62 NE
INV=912.52 SW
INV=UNOBTAINABLE SE
CORE SE INVERT TO ACCOMMODATE NEW PIPE
CONTACT ENGINEER WITH EXISTING INV. ELEVATION

52 EXIST. 51 LIN FT SS RCP 8"
TO BE REMOVED AND REPLACED
WITH 25 LIN FT SS RCP 12"
@0.50% (APPROXIMATE)

52A CB TA 4' DIA. R-3281-A
T/C=917.74
INV=913.21 SW
INV=913.21 NW

52B 58 LIN FT SS RCP 12"
@ 0.50%

52C INLET TA R-2504
RIM=916.20
INV=913.50

53 EXIST. 120 LIN FT SS RCP 18"
TO REMAIN

54 EXISTING STORM MANHOLE
EXIST. RIM=919.60
PROP. RIM=919.80
INV=915.06 NW, NE
INV=915.02 SW

55 EXIST. 127 LIN FT SS RCP 24"
TO REMAIN

56 EXISTING STORM MANHOLE
EXIST. RIM=916.95
PROP. RIM=
INV=911.10 NE
INV=911.15 SW

57 EXIST. 134 LIN FT SS RCP 24"
TO REMAIN

57A CB TA 4' DIA R-2504 TY D GRATE
RIM=916.75
INV=911.57 NE, SW
CONTRACTOR TO VERIFY INVERT PRIOR TO
ORDERING STRUCTURE

58 EXISTING STORM MANHOLE
EXIST. RIM=917.65
PROP. RIM=918.30
INV=912.03 NE
INV=911.90 SW

59 EXIST. 133 LIN FT SS RCP 24"
TO REMAIN

59A CB TA 5' DIA R-3281-A
CONSTRUCT ONLINE
T/C=918.09
INV=913.00 N
INV=912.41 NE, SW

59B 25 LIN FT SS RCP 12"
@ 0.52%

59C INLET TA R-3281-A
T/C=918.04
INV=913.13

60 EXISTING STORM MANHOLE
EXIST. RIM=918.07
PROP. RIM=918.00
INV=912.92 NE
INV=912.85 SW

61 EXIST. 150 LIN FT SS RCP 24"
TO REMAIN

61A CB TA 4' DIA R-2504 TY D GRATE
CONSTRUCT ONLINE
VERIFY INVERTS PRIOR TO ORDERING STRUCTURE
RIM=917.60
INV=913.55 NE, SW

62 EXISTING STORM MANHOLE
EXIST. RIM=917.57
INV=914.02 NW
INV=913.97 SW

63 EXIST. 55 LIN FT SS RCP 12"
TO REMAIN

64 EXIST PRC FES 12"
INV=914.21

100 PRC FES 18
INV=910.00

101 84 LIN FT SS RCP 18"
@ 0.80%

102 CB TA 4' DIA R-4342
RIM = 914.80
INV=912.30 SE
INV=912.30 NW
INV=910.70 S

103 60 LIN FT UNDERDRAIN 4" PVC
SEE DETAIL
@ 1.00%

103A CLEANOUT
SEE DETAIL
RIM=915.40
INV=912.90

104 61 LIN FT UNDERDRAIN 4" PVC
SEE DETAIL
@ 1.64%

104A CLEANOUT
SEE DETAIL
RIM=915.80
INV=913.30

105 PRC FES 21
INV=911.00

106 46 LIN FT SS RCP 21"
@ 0.35%

107 CB TA 4' DIA R-3273-A TY C GRATE
T/C=915.14
INV=911.18 NW
INV=911.18 NE

108 67 LIN FT SS RCP 21"
@ 0.35%

109 CB TA 4' DIA R-2595-A
RIM=914.85
INV=911.62 NE
INV=911.42 SW

110 87 LIN FT SS RCP 18"
@ 0.39%

111 CB TA 4' DIA R-2595-A
RIM=915.00
INV=912.16 E
INV=911.96 SW

112 93 LIN FT SS RCP 15"
@ 0.35%

113 CB TA 4' DIA R-2595-A
RIM=915.65
INV=912.69 NE
INV=912.49 W

114 86 LIN FT SS RCP 12"
@ 0.35%

115 CB TC R-3281-A
T/C=916.54
INV=912.99 SW

116 PRC FES 12
INV=910.00

117 17 LIN FT SS RCP 12"
@ 0.23%

117A MONITORING MANHOLE
RIM=912.44
OPEN BOTTOM
BOTTOM OF STRUCTURE = 906.00

118 CB TA 4' DIA RESTRICTOR STRUCTURE
W/ 4" RESTRICTOR (SEE DETAIL)
RIM=915.50
INV=909.96 SW
RESTRICTOR INV= 910.05
INV=910.05 E

119 19 LIN FT SS RCP 12"
@ 0.26%

120 PRC FES 12
INV=910.00

121 EXIST. METAL END SECTION ARCH EQ RS 18
INV=913.75

122 EXIST. 60 LIN CMP ARCH EQ RS 18
TO REMAIN

123 EXIST. METAL END SECTION ARCH EQ RS 18
INV=914.10
REMOVE AND REUSE END SECTION
IF IN GOOD CONDITION
INSTALL CMP EQ RS 18 22o BEND
FIELD VERIFY ANGLE

124 35 LIN CMP ARCH EQ RS 18
@ 0.50%

125 REUSE EX. METAL END SECTION ARCH EQ RS 18
INV=914.27

126 EXIST. METAL END SECTION ARCH EQ RS 18
INV=913.83

122 EXIST. 60 LIN CMP ARCH EQ RS 18
TO REMAIN

123 EXIST. METAL END SECTION ARCH EQ RS 18
INV=914.03
REMOVE AND REUSE END SECTION
IF IN GOOD CONDITION
INSTALL CMP EQ RS 18 20o BEND
FIELD VERIFY ANGLE

124 35 LIN CMP ARCH EQ RS 18
@ 0.50%

125 REUSE EX. METAL END SECTION ARCH EQ RS 18
INV=914.20

200 EXIST. 107 LIN FT SS RCP 12"
TO REMAIN

201 EXISTING STORM CATCH BASIN
TO BE ADJUSTED
REPLACE LID WITH TY. D GRATE
EXIST. RIM=917.86
PROP. RIM=917.53
INV=914.16 NW
INV=913.81 SW

202 EXIST. 9 LIN FT SS RCP 12"
TO BE REMOVED
TRENCH TO FILL WITH TRENCH BACKFILL

203 EXISTING STORM INLET
TO BE REMOVED
EXCAVATION TO FILLED WITH TRENCH BACKFILL
EXIST. RIM=917.78
INV=914.83

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PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
STORM SEWER TAG SHEET

SHEET NO.
C-08

SANITARY TAGS

PREVIOUSLY ABANDONED SANITARY SEWER
(FOR INFORMATIONAL PURPOSES ONLY)

A1 EXIST. 312 LIN FT SAN. SEWER 8" (ABANDONED IN PLACE)
@ 0.45%

A2 EXIST. SANITARY MANHOLE, 4' DIA.
(ABANDONED IN PLACE CUT BELOW GRADE)
RIM = 915.68
INV = 910.03
INV = 910.03

A3 EXIST. 366 LIN FT SAN. SEWER 8" (ABANDONED IN PLACE)
@ 0.44%

A4 EXIST. SANITARY MANHOLE, 4' DIA.
(ABANDONED IN PLACE CUT BELOW GRADE)
RIM = 917.18
INV = 911.64
INV = 911.64

A5 EXIST. 75 LIN FT SAN. SEWER 8" (ABANDONED IN PLACE)
@ 0.21% (BACK PITCHED)

A6 EXIST. SANITARY CLEANOUT
(ABANDONED IN PLACE CUT BELOW GRADE)
RIM = 916.64
INV = 911.48
INV = 911.48

A7 EXIST. 52 LIN FT SAN. SEWER 8" (ABANDONED IN PLACE)
@ 0.46%

A8 EXIST. 75 LIN FT SAN. SEWER 8" (ABANDONED IN PLACE)
@ 0.31%

PROPOSED ABANDONED SANITARY SEWER

A20 EXIST. 53 LIN FT SAN. SEWER 8" (ABANDONED IN PLACE)
@ 0.31%

A21 SANITARY MANHOLE, 4' DIA.
(ABANDONED IN PLACE CUT BELOW GRADE)
RIM = 918.14
INV = 912.04
INV = 912.04

A22 EXIST. 79 LIN FT SAN. SEWER 8" (ABANDONED IN PLACE)
@ 0.33%

A23 EXIST. 107 LIN FT SAN. SEWER 8" (ABANDONED IN PLACE)
@ 0.54%

A24 EXIST. 63 LIN FT SAN. SEWER 8" (ABANDONED IN PLACE)

EXISTING SANITARY SEWER PER
PREVIOUS SANITARY SEWER EXTENSION

1 EXIST. SANITARY MANHOLE
RIM = 923.21
INV = 908.63 NW (EXISTING)
INV = 908.63 (NE EXISTING)(TO BE PLUGGED)
INV = 908.63 (SE EXISTING)
INV = 908.65 NE 10" PROPOSED (CORE & BOOT)

2 121 LIN FT SAN SEWER 10" (SDR 35)
@ 0.29%

3 SANITARY MANHOLE, 4' DIA.
RIM = 919.58
INV = 909.05 (10") NE
INV = 909.00 (10") SW

4 204 LIN FT SAN SEWER 10" (SDR 35)
@ 0.29%

5 SANITARY MANHOLE, 4' DIA.
RIM = 915.25
INV = 909.70 (10") NE
INV = 909.65 (10") SW

6 396 LIN FT SAN SEWER 10" (SDR 35)
@ 0.30%

7 SANITARY MANHOLE, 4' DIA.
RIM = 917.40
INV = 911.00 (8") NW
INV = 910.95 (10") NE
INV = 910.95 (10") E (PLUG TO BE REMOVED)
INV = 910.90 (10") SW

8 EXIST. 34 LIN FT SAN SEWER 10" (SDR 35)
TO BE ABANDONED

9 EXIST. SANITARY MANHOLE, 4' DIA.
TO BE ABANDONED
RIM = 917.60
INV = 911.85 (8") NE – EXISTING CONNECTION
INV = 911.10 (10") SW

10 EXIST. 128 LIN FT SAN SEWER 8" (SDR 35)
TO REMAIN

11 EXISTING CLEAN OUT (FIELD VERIFY)
RIM = 917.80

SANITARY SEWER

100 287 LIN FT SAN SEWER 10" (SDR 35)
@ 0.34%

101 SANITARY MANHOLE, 4' DIA.
RIM = 919.95
INV = 912.03 NW
INV = 912.03 NE
INV = 911.93 (10") SW

102 30 LIN FT SAN SEWER 8" (SDR 35)
W/ WYE CONNECTION
@ 2.86%
INV @ WYE = 911.44

103 EXIST. SANITARY MANHOLE
EXIST. RIM = 918.08
PROP. RIM = 916.40
INV = 912.68 N (EXISTING)
INV = 912.30 NE (EXISTING)(TO BE PLUGGED)
INV = 912.30 SW (EXISTING)(TO BE PLUGGED)
INV = 912.30 S 8" PROPOSED (CORE & BOOT)

104 EXIST. 32 LIN FT SAN. SEWER 6"
TO REMAIN

105 EXISTING CLEAN OUT
TO REMAIN
EXIST. RIM = 917.38
PROP. RIM = 917.44
INV = UNOBTAINABLE

106 30 LIN FT SAN SEWER 10" (SDR 35)
W/ WYE CONNECTION
@ 2.83%

107 EXIST. SANITARY MANHOLE
EXIST. RIM = 918.17
PROP. RIM = 918.74
INV = 912.99 N (EXISTING)
INV = 912.88 NE (EXISTING)(TO BE PLUGGED)
INV = 912.88 SW (EXISTING)(TO BE PLUGGED)
INV = 912.88 SW 10" PROPOSED (CORE & BOOT)

108 EXIST. 101 LIN FT SAN. SEWER 8"
@ 0.40%

109 EXIST. SANITARY MANHOLE
EXIST. RIM = 919.60
INV = 913.82 SW (EXISTING)
INV = 913.40 NE (EXISTING)(TO BE PLUGGED)
INV = 913.40 SW (EXISTING)(TO BE PLUGGED)

110 52 LIN FT SAN SEWER 10" (SDR 35)
@ 2.13%

111 CLEAN OUT (SEE DETAIL)
RIM = 919.90
INV @ BLDG = 913.14
CONTRACTOR TO VERIFY INVERT AT BUILDING
PRIOR TO START OF CONSTRUCTION
INSTALL 10" TO 8" PVC REDUCER AT BLDG CONNECTION

112 92 LIN FT SAN SEWER 10" (SDR 35)
@ 0.34%

113 CLEAN OUT (SEE DETAIL)
RIM = 919.70
INV = 912.35
CAP END OF PIPE

CROSSING TAGS

A STORM SEWER TAG 52B
BOP = 913.21
SANITARY SEWER TAG A23
TOP = 913.15
VERT SEP = 0.06'
* EX. SAN SEWER TO BE REMOVED
AND CAPPED AT CROSSING

B EXISTING WATERMAIN
BOP = 913.35 (FIELD VERIFY)
SANITARY SEWER TAG 110
TOP = 913.25
VERT SEP = 0.10'
* ENCASE SANITARY SEWER FOR PROTECTION

C EXISTING WATERMAIN
BOP = 913.65 (FIELD VERIFY)
SANITARY SEWER TAG 112
TOP = 913.05
VERT SEP = 0.60
* ENCASE SANITARY SEWER FOR PROTECTION

D STORM SEWER TAGS 124 & 129
BOP = 914.15
SANITARY SEWER TAG 4
TOP = 910.37
VERT SEP = 3.78'

E WATERMAIN 2" HDPE
TOP = 909.55
STORM SEWER TAG 108
BOP = 911.05
VERT SEP = 1.50
* LOWER WATERMAIN

F WATERMAIN 2" HDPE
TOP = 908.65
EXIST. SANITARY SEWER TAG A3
BOP = 910.15
VERT SEP = 1.50
* LOWER WATERMAIN

G WATERMAIN 2" HDPE
TOP = 909.75
EXIST. STORM SEWER TAG 3
BOP = 911.25
VERT SEP = 1.50
* LOWER WATERMAIN

H WATERMAIN 2" HDPE
BOP = 912.20
EXIST. SANITARY SEWER TAG 6
TOP = 910.70
VERT SEP = 1.50
* RAISE WATERMAIN

I WATERMAIN 2" HDPE
TOP = 910.00
EXIST. STORM SEWER TAG 3
BOP = 911.50
VERT SEP = 1.50
* LOWER WATERMAIN

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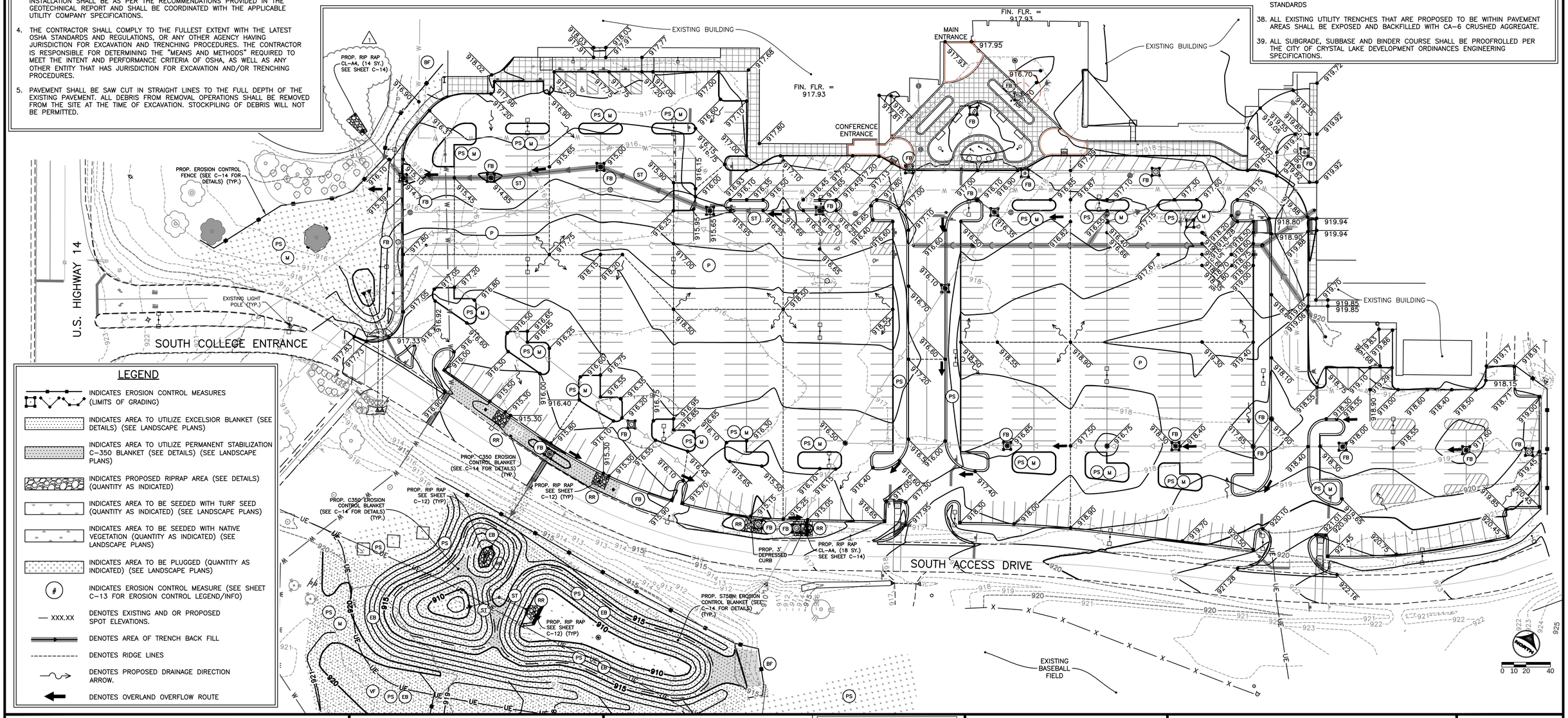
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
SANITARY SEWER & CROSSING TAGS SHEET

SHEET NO.
C-09

GRADING & DRAINAGE NOTES

1. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, GREASE TRAP REQUIREMENTS/DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE UTILITY SERVICE SIZES ARE TO BE DETERMINED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND ENSURE PROPER DEPTHS ARE ACHIEVED. THE JURISDICTION UTILITY REQUIREMENTS SHALL ALSO BE MET, AS WELL AS COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE SAME.
2. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL BE SUBMITTED IN COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT.
3. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION SHALL BE AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND SHALL BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS.
4. THE CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
5. PAVEMENT SHALL BE SAW CUT IN STRAIGHT LINES TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS SHALL BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS WILL NOT BE PERMITTED.
6. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT TOPS SHALL BE ADJUSTED, IF REQUIRED, TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS.
7. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 0.75% MINIMUM SLOPE ALONG ALL ISLANDS, GUTTERS, AND CURBS; 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITHOUT NOTIFICATION IS DONE SO AT THE CONTRACTOR'S OWN RISK.
8. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE EXISTING LOCAL ASPHALT GRADE UNLESS OTHERWISE NOTED. FIELD ADJUST TO CREATE A MINIMUM OF 0.75% LONGITUDINAL GUTTER GRADE ALONG CURB FACE. ENGINEER TO APPROVE FINAL CURBING CUT SHEETS PRIOR TO INSTALLATION.
9. IN CASE OF DISCREPANCIES BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE. IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS.
10. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
11. SEE EROSION CONTROL PLAN FOR EROSION CONTROL MEASURES AND NOTES.
12. ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN, FENCING, TREES, & ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED & DISPOSED OF OFF SITE. NO ON SITE BURNING WILL BE ALLOWED
13. ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST.
14. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
15. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
16. NO PART OF THE PROPOSED PROJECT IS LOCATED WITHIN A FLOOD HAZARD AREA
17. SPOT ELEVATIONS SHOWN ARE @ EDGE OF PAVEMENT UNLESS OTHERWISE NOTED ON PLAN.
18. SEE PLANS FOR EXACT LOCATION OF 6" CONCRETE BARRIER CURB AND CONCRETE CURB & GUTTER SHALL BE TYPE B-6.12 CURB UNLESS OTHERWISE NOTED ON THE PLANS.
19. ALL STORM SEWER JOINTS SHALL HAVE O-RING GASKETS.
20. ALL STORM SEWER PIPE CONNECTIONS TO MANHOLES OR OTHER STRUCTURES SHALL BE CONNECTED THROUGH THE USE OF RUBBER BOOTS.
21. MATCH EXISTING GRADES AT PROPERTY LINES AND/OR CONSTRUCTION LIMITS.
22. BACKFILL TO THE TOP OF CURBS.
23. SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS
24. ALL SIDEWALK CROSS SLOPES SHALL BE A MAXIMUM OF 2%. CROSS SLOPE
25. DESIGNATED HANDICAP PARKING AREAS SHALL BE GRADED TO A MAXIMUM OF 2%
26. SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING OF PAVEMENT.
27. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
28. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE CONTROL TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
29. ALL FIELD TILES ENCOUNTERED SHALL BE REPLACED AND/OR CONNECTED TO THE STORM SEWER SYSTEM AND LOCATED AND IDENTIFIED ON THE RECORD PLANS BY THE CONTRACTOR.
30. ALL STORM DRAINAGE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF CRYSTAL LAKE.
31. ELEVATIONS AND CONTOURS ARE TO STATE PLANE COORDINATES PER NAVD DATUM.
32. ACCESSIBLE PARKING, RAMPS, AND SIGNAGE SHALL COMPLY WITH ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
33. 1 WEEK PRIOR TO CONSTRUCTION WITHIN CITY ROW OR ANY CONNECTION TO PUBLIC SEWERS, CONTRACTOR SHALL NOTIFY THE APPROPRIATE CITY ENGINEERING DIVISIONS:
34. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION UNITS. THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OR MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
35. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
36. THE CONTRACTOR MAY BE REQUIRED TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY, AS DIRECTED BY THE ENGINEER OR THE MCHENRY COUNTY COLLEGE.
37. ALL CONSTRUCTION WITHIN PUBLIC ROW/EASEMENTS AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, SHALL COMPLY WITH THE CITY CONSTRUCTION SPECIFICATIONS FOR SUBDIVISIONS AND LATEST EDITION OF IDOT DESIGN STANDARDS
38. ALL EXISTING UTILITY TRENCHES THAT ARE PROPOSED TO BE WITHIN PAVEMENT AREAS SHALL BE EXPOSED AND BACKFILLED WITH CA-6 CRUSHED AGGREGATE.
39. ALL SUBGRADE, SUBBASE AND BINDER COURSE SHALL BE PROOFROLLED PER THE CITY OF CRYSTAL LAKE DEVELOPMENT ORDINANCES ENGINEERING SPECIFICATIONS.



LEGEND

- INDICATES EROSION CONTROL MEASURES (LIMITS OF GRADING)
- INDICATES AREA TO UTILIZE EXCELSIOR BLANKET (SEE DETAILS) (SEE LANDSCAPE PLANS)
- INDICATES AREA TO UTILIZE PERMANENT STABILIZATION C-350 BLANKET (SEE DETAILS) (SEE LANDSCAPE PLANS)
- INDICATES PROPOSED RIPRAP AREA (SEE DETAILS) (QUANTITY AS INDICATED)
- INDICATES AREA TO BE SEEDED WITH TURF SEED (QUANTITY AS INDICATED) (SEE LANDSCAPE PLANS)
- INDICATES AREA TO BE SEEDED WITH NATIVE VEGETATION (QUANTITY AS INDICATED) (SEE LANDSCAPE PLANS)
- INDICATES AREA TO BE PLUGGED (QUANTITY AS INDICATED) (SEE LANDSCAPE PLANS)
- (#) INDICATES EROSION CONTROL MEASURE (SEE SHEET C-13 FOR EROSION CONTROL LEGEND/INFO)
- XXX.XX DENOTES EXISTING AND OR PROPOSED SPOT ELEVATIONS.
- DENOTES AREA OF TRENCH BACK FILL
- DENOTES RIDGE LINES
- DENOTES PROPOSED DRAINAGE DIRECTION ARROW.
- DENOTES OVERLAND OVERFLOW ROUTE

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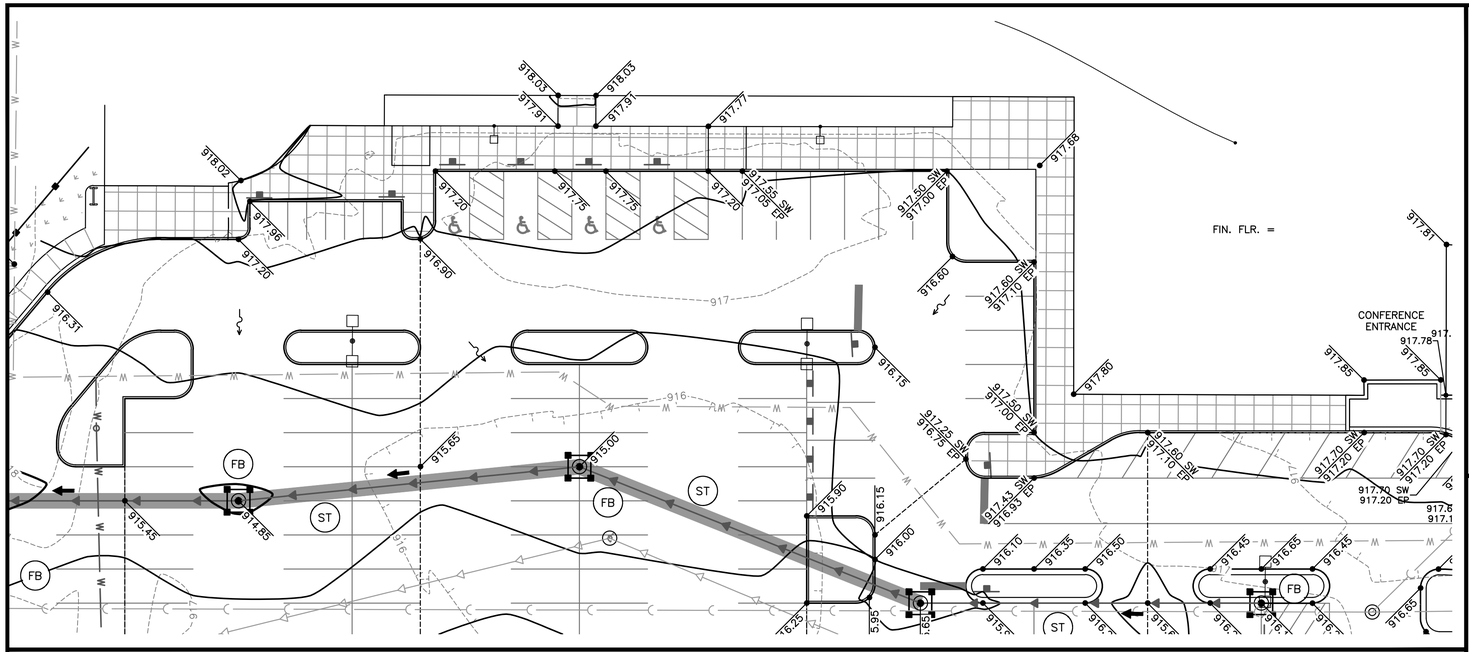
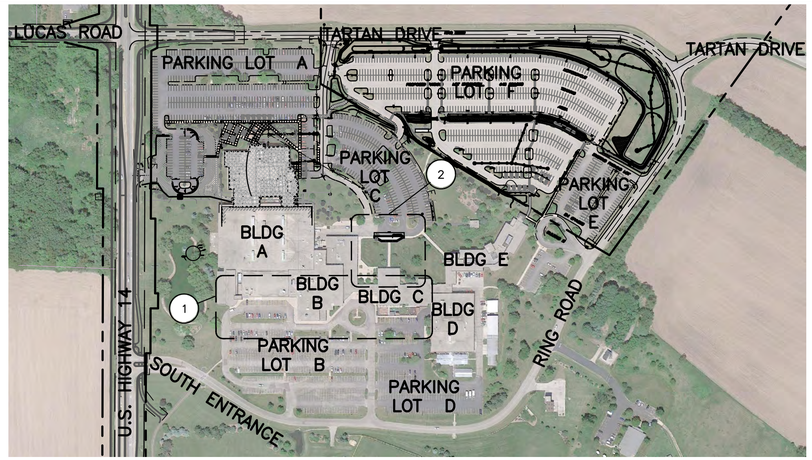
McHenry County College

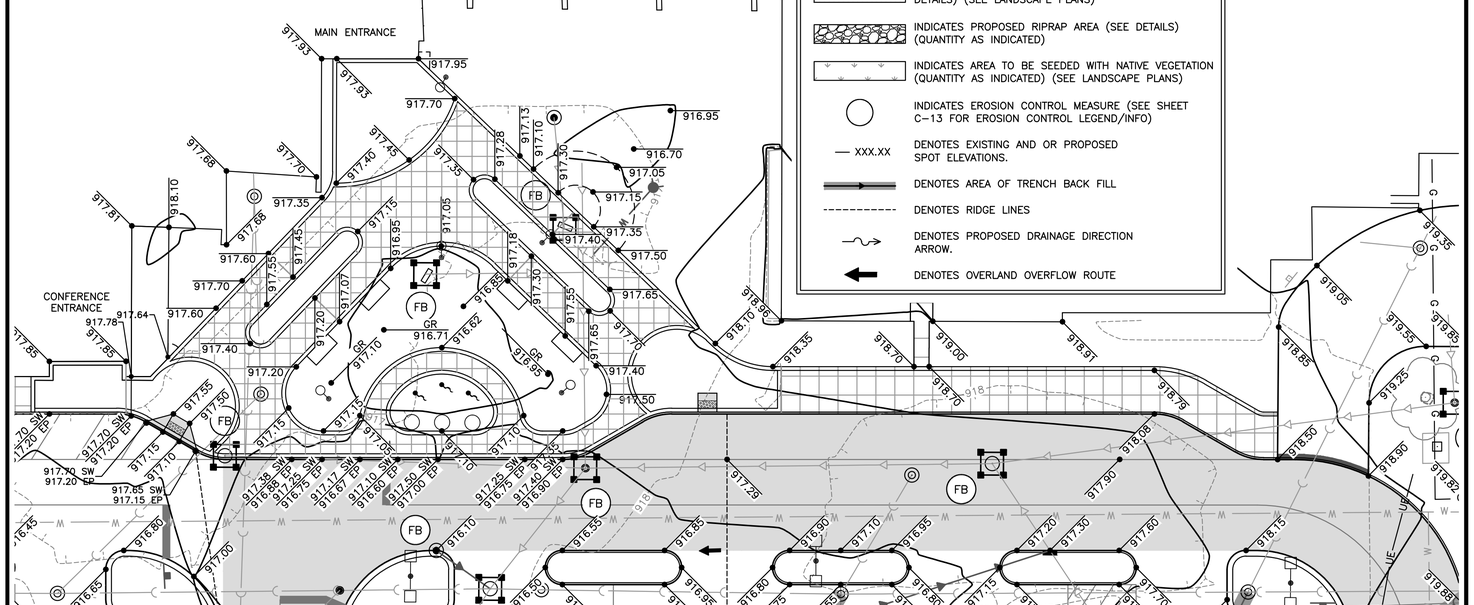
McHENRY COUNTY COLLEGE
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
PHASE 2 – EROSION CONTROL, GRADING AND SITE RESTORATION PLAN FOR LOT B & D

SHEET NO.
C-10







LEGEND

- INDICATES EROSION CONTROL MEASURES (LIMITS OF GRADING)
- INDICATES AREA TO UTILIZE EXCELSIOR BLANKET (SEE DETAILS) (SEE LANDSCAPE PLANS)
- INDICATES PROPOSED RIPRAP AREA (SEE DETAILS) (QUANTITY AS INDICATED)
- INDICATES AREA TO BE SEEDED WITH NATIVE VEGETATION (QUANTITY AS INDICATED) (SEE LANDSCAPE PLANS)
- INDICATES EROSION CONTROL MEASURE (SEE SHEET C-13 FOR EROSION CONTROL LEGEND/INFO)
- XXX.XX — DENOTES EXISTING AND OR PROPOSED SPOT ELEVATIONS.
- DENOTES AREA OF TRENCH BACK FILL
- DENOTES RIDGE LINES
- DENOTES PROPOSED DRAINAGE DIRECTION ARROW.
- DENOTES OVERLAND OVERFLOW ROUTE

1 DETAILED SIDEWALK GRADING FOR PARKING LOTS B & D
SCALE: 1" = 20'

2 PARKING LOT C
SCALE: 1" = 20'

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CIVIL
PHASE 2 – EROSION CONTROL, DETAILED SIDEWALK GRADING FOR PARKING LOTS B, C & D

SHEET NO.
C-11

INFILTRATION BASIN NOTES AND CONSTRUCTION SEQUENCING

- THE INFILTRATION BASIN SHALL NOT BE USED FOR EROSION CONTROL DURING CONSTRUCTION.
- PARTIALLY EXCAVATE THE BASIN DURING DRY PERIODS, USING ONLY LIGHT EARTH-MOVING EQUIPMENT OR EQUIPMENT WITH OVER-SIZED TIRES. LEAVE A "SACRIFICIAL" LAY 2 FEET DEEP TO BE EXCAVATED LATER. AFTER THE DEVELOPMENT IS STABILIZED, COMPLETE THE EXCAVATION. THE INFILTRATION SITE SHOULD BE DEEP-TILLED AND LEVELED AFTER EXCAVATION.
- BEFORE ANY CONSTRUCTION BEGINS, DIVER STORMWATER RUNOFF AND CONSTRUCTION TRAFFIC AWAY FROM THE SITE OF THE BASIN.
- STABILIZE BASIN SIDE SLOPES IMMEDIATELY AFTER CONSTRUCTION WITH EROSION CONTROL BLANKET AND VEGETATION.
- FINAL BASIN CONSTRUCTION SHOULD NOT BEGIN UNTIL THE UPLAD SITE IS STABILIZED.
- EXCAVATE THE LAST 2 FEET OF THE BASIN USING A BACKHOE OR TRENCHER WITH OVERSIZED TIRES TO PREVENT COMPACTION. DO NOT USE BULLDOZERS OR FRONT-END LOADERS.
- AFTER THE FINAL BASIN BOTTOM IS GRADED, ROUGHEN OR SCARIFY THE BOTTOM AND SIDES TO RESTORE INFILTRATION CAPACITY THAT MAY HAVE BEEN COMPROMISED BY RAINFALL OR SMEARING OF THE SOIL SURFACE DURING EXCAVATION.
- PERFORM INFILTROMETER TESTS TO DETERMINE THAT BASIN INFILTRATION IS WORKING.
- PLACE THE GEOTEXTILE FILTER FABRIC ON THE BASIN BOTTOM, OVERLAPPING IT AT THE SEAMS TO PREVENT SOIL FINES FROM ENTERING THE STONE AGGREGATE. THE FABRIC SHOULD BE FLUSH WITH THE WALLS.
- PLACE THE SAND LAYER IN THE BASIN. USING UNWASHED SAND MAY RESULT IN PREMATURE CLOGGING FROM THE ATTACHED SEDIMENT.
- PLACE ENGINEERED SOIL AFTER CITY APPROVAL.

INFILTRATION BASIN POST-CONSTRUCTION TESTING

- THE INFILTRATION BASIN SHALL BE TESTED TO DOCUMENT THE CONSTRUCTED INFILTRATION PERFORMANCE.
- THERE SHALL BE TWO (2) INFILTRATION TESTS PER THE REQUIREMENTS OF THE CRYSTAL LAKE WATERSHED STORMWATER MANAGEMENT DESIGN MANUAL.
- THE TESTING METHODOLOGY SHALL BE AT LEAST THAT DESCRIBED USING THE INFILTROMETER METHOD LISTED IN THE CRYSTAL LAKE WATERSHED STORMWATER MANAGEMENT DESIGN MANUAL CHAPTER 2 STARTING ON PAGE 2-4.
- TESTING SHALL BE OBSERVED BY THE CITY OR ITS REPRESENTATIVES.
- WRITTEN TEST RESULTS SHALL BE FILED WITH THE CITY IMMEDIATELY AFTER TESTING.

SPECIAL NOTES:

- DURING CONSTRUCTION THE WETLAND BASIN WILL BE USED AS A SEDIMENT BASIN.
- CLAY LAYER SHALL BE INSTALLED AFTER PARKING LOT CONSTRUCTION IS COMPLETE.
- CONTRACTOR TO MONITOR SEDIMENT ACCUMULATION AND REMOVED SEDIMENT WHEN IT REACHES A DEPTH OF ONE FOOT.
- CONTRACTOR TO COORDINATE WITH FLOC LOG DISTRIBUTOR FOR TYPE AND NUMBER OF LOGS.

LEGEND

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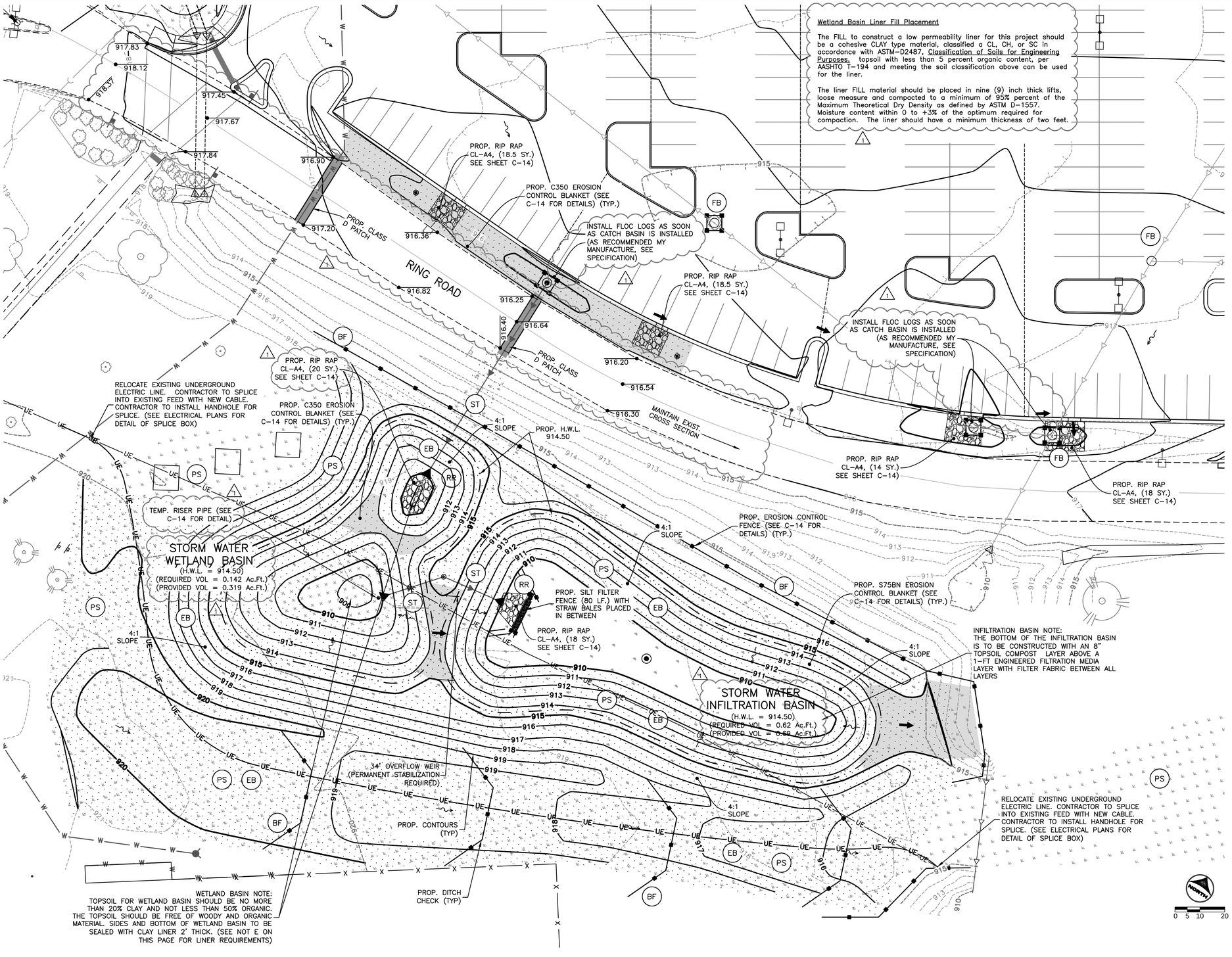
- DENOTES OVERLAND OVERFLOW ROUTE



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APPROVED:	JFV	JOB NUMBER:	86120379
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1	05/17/13	TMR	PER CITY COMMENTS

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ILLINOIS DESIGN FIRM # 184.001322
420 N. FRONT STREET, SUITE 100
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McHenry County College

McHENRY COUNTY COLLEGE
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
PHASE 2 - EROSION CONTROL, DETAILED DETENTION BASIN GRADING AND RESTORATION PLAN

SHEET NO.
C-12

CONTROL MEASURE GROUP	CONTROL MEASURE	APPL.	KEY	CONTROL MEASURE CHARACTERISTICS	TEMP.	PERMNT
VEGETATIVE SOIL COVER	TEMPORARY SEEDING	X	TS	PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING IS NOT DESIRED OR TIME OF YEAR IS INAPPROPRIATE.	X	
	PERMANENT SEEDING	X	PS	PROVIDES PERMANENT VEGETATIVE COVER TO CONTROL EROSION, FILTERS SEDIMENT FROM WATER. MAY BE PART OF FINAL LANDSCAPE PLAN.		X
	DORMANT SEEDING		DS	SAME AS PERMANENT SEEDING EXCEPT IS DONE DURING DORMANT SEASON. HIGHER RATES OF SEED APPLICATION ARE REQUIRED.		
	SODDING		SO	QUICK PERMANENT COVER TO CONTROL EROSION. QUICK WAY TO ESTABLISH VEGETATION FILTER STRIP, CAN BE USED ON STEEP SLOPES OR IN DRAINAGEWAYS WHERE SEEDING MAY BE DIFFICULT.		
	GROUND COVER		GC	PROVIDES GROUND COVER, SHRUBS AND TREES IN ADDITION TO PERMANENT VEGETATION. MAY BE USED AS PART OF A FINAL LANDSCAPE PLAN ALONG WITH SHRUBS AND TREES.		
NON VEGETATIVE SOIL COVER	MULCHING	X	M	ADDED INSURANCE OF A SUCCESSFUL TEMPORARY OR PERMANENT SEEDING. CONTROLS UNWANTED VEGETATION AND PRESERVES MOISTURE. PROVIDES COVER WHERE VEGETATION CANNOT BE ESTABLISHED.	X	
	AGGREGATE COVER		AG	PROVIDES SOIL COVER ON ROADS AND PARKING LOTS AND AREAS WHERE VEGETATION CANNOT BE ESTABLISHED. PREVENTS MUD FROM BEING PICKED UP AND TRANSPORTED OFF-SITE.		X
	PAVING	X	P	PROVIDES PERMANENT COVER ON PARKING LOTS AND ROADS OR OTHER AREAS WHERE VEGETATION CANNOT BE ESTABLISHED.		X
	EROSION BLANKET	X	EB	PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING TIME OF YEAR IS INAPPROPRIATE AND IN SLOPED AREAS.	X	
DIVERSIONS	RIDGE DIVERSION		RD	TYPICALLY USED ABOVE SLOPES. USED WHERE AN EXCESS OF SOIL IS AVAILABLE.		
	CHANNEL DIVERSION		CD	TYPICALLY USED AT TOP OR BASE OF SLOPES. USED WHEN EXCESS SOIL IS NOT AVAILABLE.		
	COMBINATION DIVERSION		DC	TYPICALLY USED ANYWHERE ONA SLOPE. SOIL TAKEN OUT OF CHANNEL IS USED TO BUILD THE RIDGE.		
	CURB AND GUTTER	X	CG	SPECIAL CASE OF DIVERSION USED IN CONJUNCTION WITH A STREET TO DIVERT WATER FROM AN AREA NEEDING PROTECTION.		
	BENCHES		B	SPECIAL CASE OF DIVERSION CONSTRUCTED WHEN WORKING ON CUT SLOPES TO SHORTEN LENGTH OF SLOPE AND ADD SLOPE STABILITY.		
WATERWAYS	BARE CHANNEL		BC	PROVIDES MEANS OF CONVEYING RUNOFF TO DESIRED LOCATION. MAY BE USED TO DRAIN DEPRESSIONAL AREAS. ONLY APPLICABLE WHEN VELOCITY OF FLOW IS VERY LOW.		
	VEGETATIVE CHANNEL	X	VC	PROVIDED ADDED STABILITY TO CHANNEL. USED WHEN VELOCITY OF FLOW IS NOT EXTREMELY FAST.		
	LINED CHANNEL		LC	USED WHEN VEGETATION WILL NOT PROTECT THE CHANNEL AGAINST HIGH VELOCITIES OF FLOW OR WHERE VEGETATION CANNOT BE ESTABLISHED.		
	ROCK CHECKS		RC	PROVIDES AN ENERGY DISSIPATOR ALONG A LENGTHY CHANNEL TO REDUCE VELOCITY OF STORMWATER		
ENCLOSED DRAINAGE	STORM SEWER	X	ST	CAN BE USED TO CONVEY SEDIMENT LADEN WATER TO SEDIMENT BASIN OR IN CONJUNCTION WITH A WATERWAY.		X
	UNDERDRAIN		UD	USED TO LOWER WATER TABLE AND INTERCEPT GROUNDWATER FOR BETTER VEGETATION GROWTH AND SLOPE STABILITY. USED TO CARRY BASE FLOW IN WATERWAYS AND TO DEWATER SEDIMENT BASINS.		
SPILLWAYS	STRAIGHT PIPE SPILLWAY		SS	USED FOR RELATIVELY SMALL VERTICAL DROPS AND SMALL FLOWS OF WATER		
	DROP INLET PIPE SPILLWAY		DIS	SAME AS PIPE SPILLWAY EXCEPT LARGER FLOWS AND LARGE VERTICAL DROPS CAN BE ACCOMMODATED.		
	WEIR SPILLWAY		W	USED FOR RELATIVELY SMALL VERTICAL DROPS AND FLOWS MUCH GREATER THAN PIPE STRUCTURES.		
	BOX INLET WEIR SPILLWAY		BS	SAME AS WEIR SPILLWAY EXCEPT LARGER FLOWS CAN BE ACCOMMODATED BECAUSE OF LOWER WEIR LENGTH.		
OUTLETS	LINED APRON		LA	PROTECTS DOWNSTREAM CHANNEL FROM HIGH VELOCITY OF FLOW DISCHARGING FROM STRUCTURES.		
	STONE RIP RAP	X	RR	USED AS AN ENERGY DISSIPATOR AT OUTLET STRUCTURES TO REDUCE VELOCITIES		
SEDIMENT BASINS	EMBANKMENT SEDIMENT BASIN		ES	USED WHERE TOPOGRAPHY LENDS ITSELF TO CONSTRUCTING A DAM AND EARTH FILL IS AVAILABLE.		
	EXCAVATED SEDIMENT BASIN		XS	USED WHERE EMBANKMENT COULD CAUSE A HAZARD DOWNSTREAM IN CASE OF FAILURE AND WHEN EXCESS EARTH FILL IS NOT AVAILABLE.		
	COMBINATION SEDIMENT BASIN		CS	USED WHEN TOPOGRAPHY IS SUITABLE BUT ADDITIONAL CAPACITY IS NEEDED.		
SEDIMENT FILTERS	BARRIER FILTER	X	BF	USED FOR SINGLE LOTS OR DRAINAGE AREAS LESS THAN 1/2 ACRE TO FILTER SEDIMENT FROM RUNOFF.	X	
	VEGETATIVE FILTER	X	VF	USED ALONG DRAINAGE WAYS OR PROPERTY LINES TO FILTER SEDIMENT FROM RUNOFF. SIZE MUST BE INCREASED IN PROPORTION TO DRAINAGE AREA.	X	
	FILTER BASKET	X	FB	USED FOR FILTERING SEDIMENT WITHIN THE ROADWAY BEFORE ENTERING THE STORM SEWER	X	
	INLET PROTECTION		IP	USED FOR FILTERING SEDIMENT WITHIN GRASS AREAS BEFORE WATER ENTERS THE STORM SEWER		
MUD AND DUST CONTROL	STABILIZED CONST. ENTRANCE	X	SE	PREVENT MUD FROM BEING PICKED UP AND CARRIED OFF-SITE.	X	
	DUST AND TRAFFIC CONTROL	X	DT	PREVENTS DUST FROM LEAVING CONSTRUCTION SITE.	X	

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

A (1) KENTUCKY BLUEGRASS 50 LBS/ACRE
MIXED WITH PERENNIAL RYEGRASS
30 LBS/ACRE AND CREEPING RED FESCUE
20 LBS/ACRE

B (1A) BLUE GRASS 30 LBS/ACRE
PERENNIAL RYEGRASS 10 LBS/ACRE
DAWSONS RED FESCUE 10 LBS ACRE
SCALDIS HARD FESCUE 10 LBS/ACRE
FULTS SALT GRASS 30 LBS/ACRE

C (4) ANDROPOGON GERNADI (BIG BLUE STEM) 4 LBS/ACRE
ANDROPOGON SCOPARIUS (LITTLE BLUE STEM) 5 LBS/ACRE
BOUTELOVA CURTIPENDULA (SIDE OATS GRAMA) 5 LBS/ACRE
ELYMUS CANADENENSIS (WILD RYE) 1 LBS/ACRE
PANCIUM VIRGATUM (SWITCH GRASS) 1 LBS/ACRE
SORGHASTRUM NUTONS (INDIAN GRASS) 2 LBS/ACRE
ANNUAL RYE GRASS 25 LBS/ACRE
OATS, SPRING 25 LBS/ACRE
PERENNIAL RYE GRASS 15 LBS/ACRE

D (4B) ANNUAL RYE GRASS 250 LBS/ACRE
OATS, SPRING 250 LBS/ACRE
WETLAND GRASSES 6 LBS/ACRE

E SPRING OATS 100 LBS/ACRE

F WHEAT OR CEREAL RYE
150 LBS/ACRE.

G SOD

H ALFALFA/SOYBEANS 100-250 LBS/ACRE (VERIFY WITH TCR)

* IRRIGATION NEEDED DURING JUNE AND JULY

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

( ) IDOT STANDARD

EROSION CONTROL NOTES

- All sedimentation and erosion control regulations shall be adhered to per City of Crystal Lake requirements
- All erosion control measures shall be installed prior to the start of construction.
- No land disturbing activities shall not commence until approval to do so has been received by governing authorities, in addition to, no land clearing or grading shall begin until all perimeter erosion and sediment control measures have been installed. (Including storm water pollution prevention plan per the development criteria.)
- If any additional soil erosion measures are deemed necessary by the City Engineer or his representative. These measures must be immediately implemented by the contractor.
- The general contractor shall strictly adhere to the storm water pollution prevention plan (swppp) during construction operations.
- All topsoil shall be stripped prior to filling
- All exposed areas shall be seeded as specified within 14 days of final grading.
- Should construction stop for longer than 14 days, the site shall be seeded as specified.
- Sediment and erosion control measures shall be inspected at least once every seven (7) days and within 24 hours of a rainfall exceeding 0.5 inches during a 24-hour period or more frequently if required by governing NPDES general permit. All maintenance required by inspection shall commence within 24 hours and be completed within 48 hours of report.
- This plan shall not be considered all inclusive as the general contractor shall take all necessary precautions to prevent soil sediment from leaving the site.
- General contractor shall comply with all state and local ordinances that apply.
- Additional erosion and sediment control measures will be installed if deemed necessary by on site inspection.
- If installation of storm drainage system should be interrupted by weather or nightfall, the pipe ends shall be covered with filter fabric.
- General contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
- All erosion and sediment control practices shall be maintained and repaired as needed to ensure effective performance of the required erosion control measures.
- All erosion and sediment control work shall conform to the I.D.O.T. Manual for, standards and procedures for erosion control.
- All construction will adhere to the requirements set forth in the IEPA's new construction site activities national pollutant discharge elimination system (NPDES) storm water permit.
- All roadways and driveways shall be cleaned at the end of each construction day.
- All disturbed areas shall be stabilized within 7 days of active disturbance.
- All erosion control measures shall be disposed of within 30 days of final stabilization of the site.
- Ground cover for 5:1 slopes or greater shall be established as soon as possible.
- All disturbed areas to to restored w/ 6" topsoil respread & seeding/sodding unless otherwise noted on plans
- Filter Baskets or Silt filter fabric shall be placed between frame and grate until vegetation is established. (see detail)
- Utilize excelsior blanket on all slopes of 5:1 or greater.
  *Seeding per I.D.O.T. Manual, section 251,standard specifications for road and bridge construction, (latest edition
  *Class 3 type - slope mixture
  *Mulch/hydroseed per I.D.O.T. Manual, section 251, standard specifications for road and bridge construction, (latest edition
  *Mulch/hydroseed method 2, procedure 3
- No dimensions shall be assumed by scaling.
- No known drain tiles are present on the proposed development, if tiles are encountered during construction please notify the engineer immediately.
- No part of the proposed project is located within a flood hazard 10-100yr area a flood hazard area
- Excess material shall be placed at specified location unless otherwise specified by owner and approved by engineer for use of lot grading. Stockpiles shall be surrounded with filter fence and shall be seeded per I.D.O.T. Manual (latest addition) (temporary) if left more than 14 working days.
- General contractor shall notify all utility companies having underground utilities on site or in right-of-way prior to excavation. Contractor shall contact utility locating company and locate all utilities prior to grading start.

PHASING NOTES:

SEQUENCE OF MAJOR ACTIVITIES

The Contractor will be responsible for implementing the following erosion control and storm water management control measures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows (refer to the Erosion and Sediment Control Plan Sheet contained in this SWPPP for details and refer to the Suggested Phasing Plan in the design drawings for construction sequencing):

A. A pre-construction meeting shall be held by the Site Project Manager and the Operator's Engineer prior to land disturbing activities.
B. Install perimeter silt fences and inlet protection in the locations shown on the Erosion Control plan sheets.
C. Implement erosion control measures around the existing storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
D. Construct temporary construction exits at locations shown on the Erosion Control plan sheets.
E. Begin clearing and grubbing operations if applicable. Clearing and grubbing shall be done only in areas where earthwork will be performed and only in areas where building is planned to commence within 7 days after clearing and grubbing.
F. Disturbed areas of the site where Construction Activity has ceased for more than 7 days shall be temporarily seeded and watered.
G. Commence site grading.
H. Construct gutter inlets, area inlets, storm sewer manholes and proposed storm sewer.
I. Install inlet / outlet protection around the constructed storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
J. Construct utilities
K. Finalize pavement subgrade preparation.
L. Construct all curb and gutter. Inlet protection may be removed temporarily for this construction.
M. Remove inlet protection around inlets and manholes no more than 48 hours prior to placing stabilized base course.
N. Install base material as required for pavement.
O. Carry out final grading and seeding, sodding and planting, including rolled erosion control products where shown on the Erosion Control plan sheets.
P. Remove silt fencing only after all paving is complete and exposed surfaces are stabilized.
Q. Remove temporary construction exits

A schedule for implementation for the activities identified above is included as Form C-3 of the SWPPP.

SPECIFICATIONS & GENERAL NOTES

NOTES:

This plan has been prepared to comply with the provisions of the NPDES Permit Number issued by the Illinois Environmental Protection Agency for Stormwater Discharges from Construction Site Activities.

1. Site Description.

a. The following is a description of the construction activity which is the subject of this plan:
The proposed development consists of construction of Parking lot demolition and reconfiguration, storm sewer, swales, sanitary sewer, water main and utility reconfigurations. The construction activities for site improvements will include: site clearing, grubbing, mass grading, pavement construction, installation of utilities including storm sewers, soil erosion and sedimentation control measures, as a minimum.

b. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site such as grubbing, excavation, and grading:

The sequence of the construction activities may be as follows:
See Sequence of major activities on this sheet.

c. The total area of the construction site is estimated to be 7.0± acres.

The total area if the site that is estimated to be disturbed by excavation, grading, or other activities, is 7.0± acres.

2. Controls.

This section of the plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b above. For each measure discussed, the contractors will be responsible for its implementation as indicated. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan.

a. Erosion and Sediment Controls.

(i) STABILIZATION PRACTICES. Provided below is a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Except as provided in 2.a. (i) (A) and 2.b. stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portions of the site where construction activity will not occur for a period of 21 or more calendar days.

(A) Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following interim and permanent stabilization practices, as a minimum will be implemented to stabilize the disturbed area of the site:

1 Temporary Seeding
2 Permanent seeding
3 Erosion Blanket
4 Stone Riprap
5 Barrier filter
6 Inlet protection
7 Outlet protection
8 Vegetative filter
9 Vegetative channel
10 Stabilized construction entrance
11 Dust & Traffic Control

(ii) STRUCTURAL PRACTICES. Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1. Detention basins
2. Storm sewer system
3. Vegetated drainage swales
4. Permanent seeding
5. Stone Riprap
6. Outlet protection
7. Filter fabric
8. Inlet protection

b. Erosion Control. It shall be the Contractor's responsibility to provide adequate erosion control on the job site. The following erosion control sequence shall be adhered to:

A. A pre-construction meeting shall be held by the Site Project Manager and the Operator's Engineer prior to land disturbing activities.
B. Install perimeter silt fences and inlet protection in the locations shown on the Erosion Control plan sheets.
C. Implement erosion control measures around the existing storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
D. Construct temporary construction exits at locations shown on the Erosion Control plan sheets.
E. Begin clearing and grubbing operations if applicable. Clearing and grubbing shall be done only in areas where earthwork will be performed and only in areas where building is planned to commence within 7 days after clearing and grubbing.
F. Disturbed areas of the site where Construction Activity has ceased for more than 7 days shall be temporarily seeded and watered.
G. Commence site grading.
H. Construct gutter inlets, area inlets, storm sewer manholes and proposed storm sewer.
I. Install inlet / outlet protection around the constructed storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control plan sheets.
J. Construct utilities
K. Finalize pavement subgrade preparation.
L. Construct all curb and gutter. Inlet protection may be removed temporarily for this construction.
M. Remove inlet protection around inlets and manholes no more than 48 hours prior to placing stabilized base course.
N. Install base material as required for pavement.
O. Carry out final grading and seeding, sodding and planting, including rolled erosion control products where shown on the Erosion Control plan sheets.
P. Remove silt fencing only after all paving is complete and exposed surfaces are stabilized.
Q. Remove temporary construction exits

Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the Contractor, on a weekly basis, until the seeding has taken hold. All washouts, gullies, etc. will be regraded and reseeded by the Contractor, at the Contractor's expense.

The Contractor's responsibility for erosion control shall extend throughout the construction process. The Contractor shall be responsible for cleanup of paved surfaces within and adjacent to the project.

All erosion control practices shall be in compliance with the latest revision of the "Standard Specifications for Road and Bridge Construction," by the Illinois Department of Transportation and with "Standards and Specifications for Soil Erosion and Sedimentation Control" as published by the Illinois Environmental Protection Agency.

If a topsoil stockpile location is provided and approved by the City, Contractor shall establish erosion control measures for the stockpile if it is to remain in place for more than three days. In addition, barrier filter fence shall enclose topsoil stockpile location with exception of truck access during construction hours.

c. Stormwater Management.

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

The practices selected for implantation were determined on the basis of the technical guidance contained in IEPA's Standard Specifications for Soil Erosion and Sedimentation Control, and other ordinances listed in the Specifications.

The stormwater pollutant control measures shall include:

1. Silt filter fence
2. Drainage swales
3. Storm sewers
4. Rip-rap outlet protection
5. Inlet protection
6. Retention/Detention ponds

(ii) Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Stormwater Management Control includes
1 Stone Riprap
2 Filter Fabric
3 Vegetative channels.
4 Inlet protection.

3. Other Controls.

(i) Waste Disposal. The solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed off-site by the contractor. The contractor is responsible to acquire any permit required for such disposal. Burning on the site will not be permitted. No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

(ii) The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

The sanitary sewage will be discharged to the proposed sanitary sewer constructed per IEPA and local standards.

a. Approved State or Local Plans.

The management practices, controls and other provisions contained in this plan are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Standards and Specifications for Soil and Erosion and Sediment Control dated October 1987, Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Plan, and the Municipal Subdivision Ordinance. Requirements specified in sediment and erosion control site plans or site permits or stormwater management or site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

b. Maintenance.

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan and Standard Specifications.

Vegetative erosion control measures: The vegetative growth of temporary and permanent seeding, sodding, vegetative channels, vegetative filter, etc. shall be maintained periodically and supply adequate watering and fertilizer. The vegetative cover shall be removed and reseeded as necessary.

Silt filter fence: The damaged silt filter fence shall be restored to meet the standards or removed and replaced as needed.

Rip-rap outlet protection: It shall be inspected after high flows for any scour beneath the Rip-rap or for stones that have been dislodged. It shall be repaired immediately.
Inlet Protection: Shall be inspected and emptied of silt if filled as required.

Disturbed areas shall be stabilized with temporary or permanent measures within 7 calendar days following the end of active disturbance, or redisturbance, consistent with the following criteria:

(i) Appropriate temporary or permanent stabilization measures shall include seeding, mulching, sodding, and/or non-vegitative measures.
(ii) Areas having slopes greater than 12 percent shall be stabilized with sod, mat, or blanket in combination with seeding or equivalent.

Soil storage piles containing more than 10 cu. yds. of material shall not be located with a downslope drainage length less than 25 feet to a roadway or drainage channel. Filter barriers, including straw bales, filter fence, or equivalent, shall be installed immediately on the down slope of the piles.

4. Inspections.

The Owner, or Owner's representative shall provide qualified personnel to inspect disturbed areas of the construction site which have not been finally stabilized, structural control measures and location where vehicles enter or exit the site. Such inspections shall be conducted at least once every seven (7) calendar days within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.

b. Based on the results of the inspection, the description of potential pollutant sources identified in section 1 above and pollution prevention measures identified in section 2 above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within 7 calendar days following the inspection.

c. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this stormwater pollution prevention plan and actions taken in accordance with section 4.b. shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI.G of the general permit.

d. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit. The report of noncompliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
2200 Churchill Road
Post Office Box 19276
Springfield, Illinois 62794-9276

5. Non-Stormwater Discharges.
Except for flows from fire fighting activities, sources of non-stormwater that may be combined with stormwater discharges associated with the industrial activity addressed in this plan, are described below:

a. Water main flushing
b. Fire hydrant flushing
c. Watering for dust control
d. Irrigation drainage for vegetative growth for seeding, etc..

The pollution prevention measures, as described below, will be implemented for non-stormwater components of the discharge:

The fire hydrant and water main shall not be flushed directly on the exposed area of sub grade of the pavement. Hoses shall be used to direct the flow into the storm sewer system, if available.

The erosion due to irrigation of seeding shall be considered minor.

Contractor to provide the above non-stormwater discharged control to the standard specification required by the City or the approved equal.

6. Monitoring and Management Plan
A three-year maintenance and monitoring plan is required after installation of native landscaping.
See Project Specifications for details.

CONSTRUCTION SEQUENCE

1. File sotrmwater NPDES permit with the IEPA at least 30 days prior to beginning work.
2. Install all permanent and temporary erosion control practices, i.e. diversions, vegetated swales, stabilized construction entrances, temporary silt basins, polymer systems, and silt fences.
3. Construct temporary sediment basins. Wet or wetland MCP's can be used as temporary sediment basins.
4. Install perforated risers and floc logs.
5. City inspection and signoff.
6. Strip topsoil.
7. Stabilize stockpiles with vegetative cover and additional erosion control measures.
8. City inspection and signoff.
9. Begin mass grading.
10. Add additional soil erosion and sediment control as needed. In particular the CLSO requirement for stabilization within 14 days of temporary or permanent cessation of grading must be met and will be vigorously enforced by the City.
11. Disk disturbed pervious areas to restore infiltration prior to topsoil placement and vegetation.
12. Partially excavate infiltration basin and add fabric and sand cover.
13. City inspection of infiltration basin.
14. Permanent site stabilization.
15. City inspection.
16. Finish infiltration basin construction.
City inspection.

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DRAWN BY: MPL JOB DATE: 2013
APPROVED: JFV JOB NUMBER: 86120379
CAD DATE: 5/20/2013 10:33:38 AM
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McHenry County College

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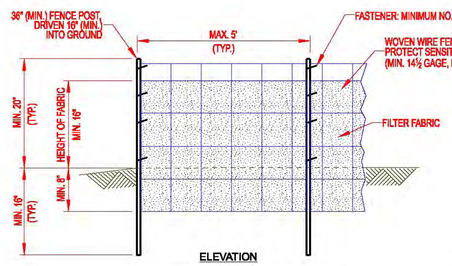
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
EROSION CONTROL SPECIFICATIONS

SHEET NO.
C-13

EC-01



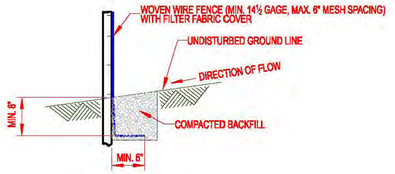
ELEVATION

MATERIAL SPECIFICATIONS:

POSTS:	STEEL (EITHER "T" OR "U" TYPE) OR HARDWOOD WITH A MINIMUM CROSS-SECTIONAL AREA OF 3.0 SQ. IN.
FENCE:	WOVEN WIRE (14 ½ GAGE) WITH 6" MAX. MESH OPENING
FILTER CLOTH:	FILTER X, MIRAFI 100X, STABILINKA T 140N.

NOTES:

1. TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED, AS NEEDED, THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POST WITH TIES OR STAPLES
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION
4. WHEN TWO (2) SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX (6) INCHES AND FOLDED
5. MATERIAL SHALL BE REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE
6. DOUBLE ROWS OF SILT FENCE SPACED FIVE (5) FEET APART SHALL BE PLACED AROUND EXISTING STORMWATER MANAGEMENT FACILITIES OR WETLANDS AS ADDITIONAL PROTECTION



FABRIC ANCHOR DETAIL

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

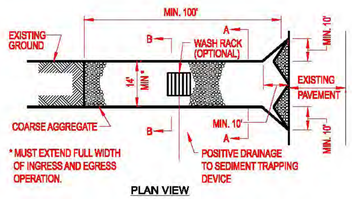
Drawing Name: SILT FENCE

Drawing Number: EC-01
Date: 11/2/2007
Drawn: EM Checked: LZ

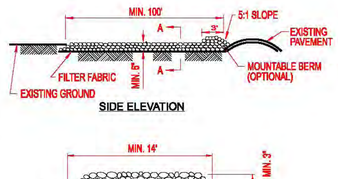
CRYSTAL LAKE ILLINOIS Engineering Division

L:\ENGINEERING AND BUILDING\ENGINEERING\DETAILS AND STANDARDS\

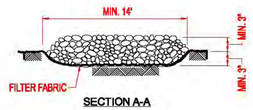
EC-02



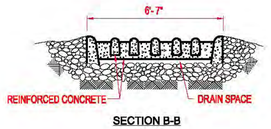
PLAN VIEW



SIDE ELEVATION



SECTION A-A



SECTION B-B

NOTES:

1. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 282 OF THE IDOT STANDARD SPECIFICATIONS AND SHALL BE PLACED OVER THE CLEARED AREA PRIOR TO THE PLACEMENT OF ROCK.
2. ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATIONS, CA-1, CA-2, CA-3 OR CA-4.
3. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
4. IF WASH RACKS ARE USED, THEY SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

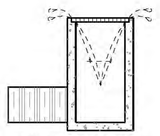
Drawing Name: CONSTRUCTION ENTRANCE

Drawing Number: EC-02
Date: 4/15/2007
Drawn: EM Checked: LZ

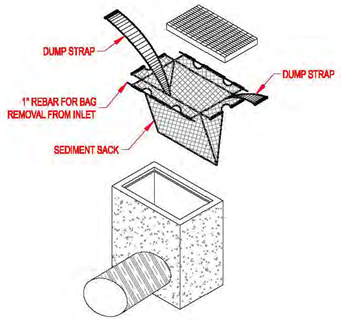
CRYSTAL LAKE ILLINOIS Engineering Division

L:\ENGINEERING AND BUILDING\ENGINEERING\DETAILS AND STANDARDS\

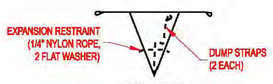
EC-04



INSTALLATION DETAIL



SEDIMENT CONTROL DEVICE



BAG DETAIL

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

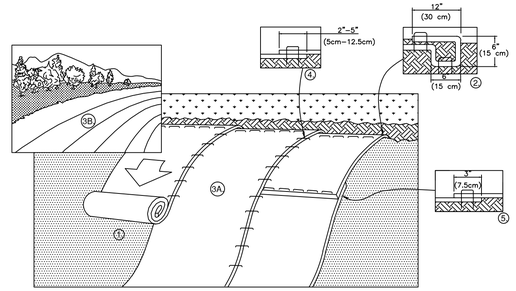
Drawing Name: INLET SEDIMENT CONTROL DEVICE

Drawing Number: EC-04
Date: 4/15/2007
Drawn: EM Checked: LZ

CRYSTAL LAKE ILLINOIS Engineering Division

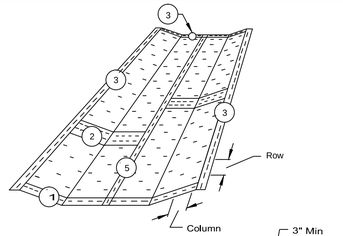
L:\ENGINEERING AND BUILDING\ENGINEERING\DETAILS AND STANDARDS\

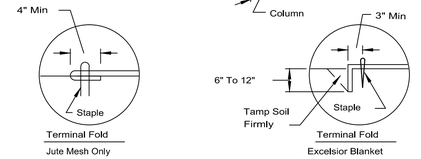
SLOPE INSTALLATION



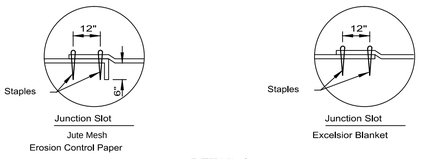
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
   NOTE:
   *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

EROSION BLANKET PLAN





DETAIL 1



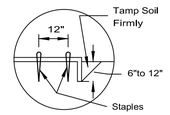
DETAIL 2

REFFERENCE
Project
Designed Date
Checked Date
Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-530
SEEET 1 OF 2
DATE 5-24-94

EROSION BLANKET PLAN



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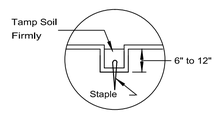
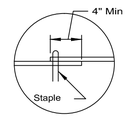
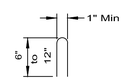


DETAIL 4



DETAIL 5



STAPLE DETAIL

NOTES:

1. On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
2. Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4'x 225' roll of material and 125 staples are required per 4'x 150' roll of material.
3. Erosion control material shall be placed loosely over ground surface. Do not stretch.
4. All terminal ends and transverse laps shall be stapled at approximately 12" intervals.

REFFERENCE
Project
Designed Date
Checked Date
Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-530
SHEET 2 OF 2
DATE 3-1-95

DRAWN BY: MPL JOB DATE: 2013
APPROVED: JFV JOB NUMBER: 86120379
CAD DATE: 5/20/2013 10:33:38 AM
CAD FILE: O:\86120379\CAD\Parking_Lot\Dwgs\C\86120379-Details.dwg

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	05/17/13	TMR	PER CITY COMMENTS

HRGreen
ILLINOIS DESIGN FIRM # 184.001322
420 N. FRONT STREET, SUITE 100
McHENRY, ILLINOIS 60050
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805
FAX: 815.385.1781 | HRGreen.com

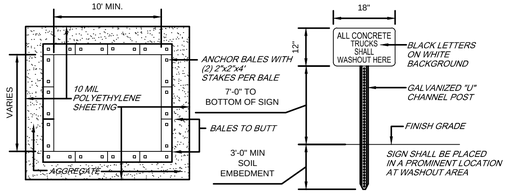
McHenry County College

McHENRY COUNTY COLLEGE
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
EROSION CONTROL DETAILS

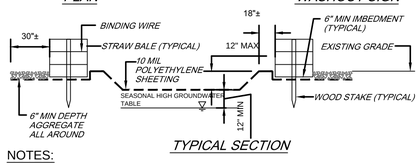
SHEET NO.
C-14

CONCRETE WASHOUT AREA



PLAN

WASHOUT SIGN



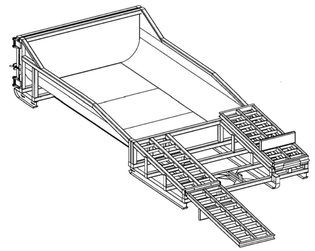
TYPICAL SECTION

NOTES:

1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

ALTERNATIVE CONCRETE WASHOUT AREA

PORTABLE CONCRETE WASHOUT CONTAINER

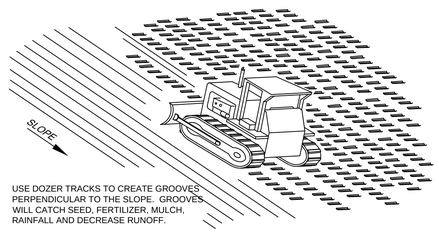


CONCRETE WASHOUT SYSTEMS

PO Box 2604
Carmichael, CA. 95609
Phone: 1.877.292.7468
Fax: 1.916.244.0403
info@concretewashout.com
www.concretewashout.com
Patent Pending

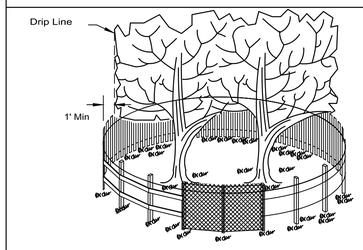
REV. 01/05

TRACKING DETAIL

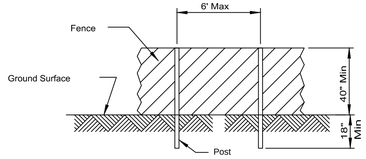


USE DOZER TRACKS TO CREATE GROOVES PERPENDICULAR TO THE SLOPE. GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE RUNOFF.

TREE PROTECTION - FENCING



SIDE VIEW



POST AND FENCE DETAIL

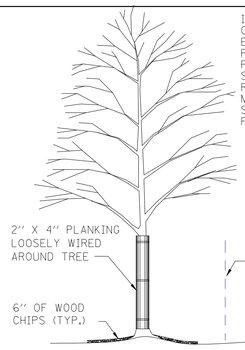
NOTES:

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

REFERENCE			
Project			
Designed	Date		
Checked	Date		
Approved	Date		

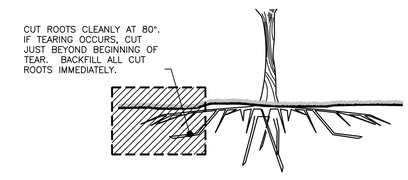
NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-690
SHEET 1 OF 1
DATE 4-7-94



TYP. TREE TRUNK PROTECTION DETAIL

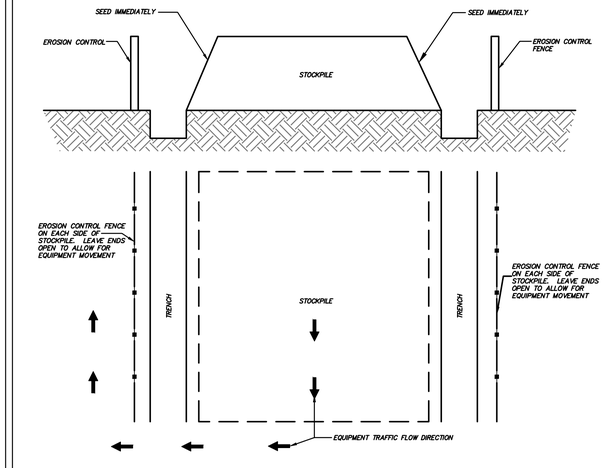
SCALE: NTS



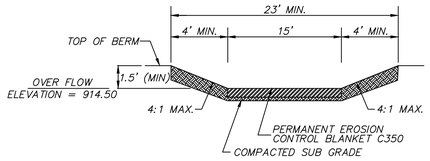
TYP. ROOT PRUNING DETAIL

SCALE: NTS

STOCKPILE DETAIL

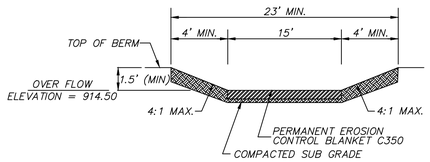


INFILTRATION BASIN OVERFLOW SWALE DETAIL



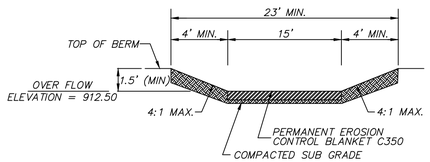
E-1

WETLAND BASIN OVERFLOW SWALE DETAIL



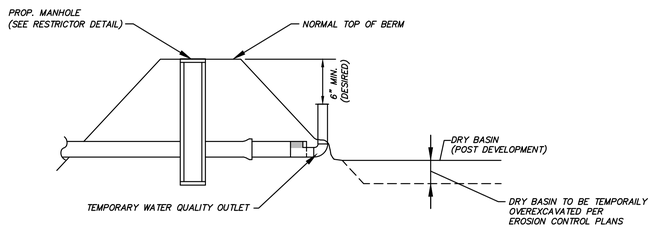
E-1

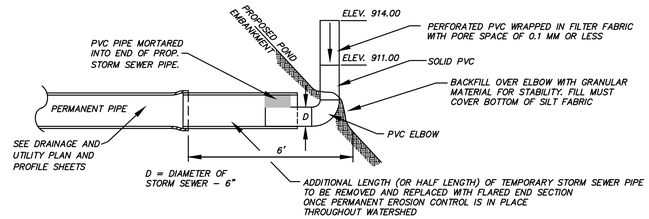
WETLAND FOREBAY OVERFLOW SWALE DETAIL



E-1

TEMPORARY WATER QUALITY RISER SEDIMENTATION AND EROSION CONTROL IN WETLAND BASIN





NOTES:
FOR PERMANENT STORM SEWER PIPE SIZE, MATERIAL, PAY ITEMS AND QUANTITIES, SEE DRAINAGE AND UTILITY PLAN AND PROFILE SHEETS AND DRAINAGE SCHEDULE OF QUANTITIES SHEETS.

PVC PIPE, MORTAR, TEMPORARY STORM SEWER PIPE, AND GRADING REQUIRED FOR REPLACING TEMPORARY STORM SEWER PIPE WITH PERMANENT FLARED END SECTION ARE INCLUDED IN THE COST OF DRAINAGE RESTRICTOR.

DRAWN BY:	MPL	JOB DATE:	2013
APPROVED:	JFV	JOB NUMBER:	86120379
CAD DATE:	5/20/2013 10:33:38 AM		
CAD FILE:	O:\86120379\CAD\Parking_Lot\Dwgs\C\86120379-Details.dwg		

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 — 1". IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	05/17/13	TMR	PER CITY COMMENTS

HRGreen

ILLINOIS DESIGN FIRM # 184.001322
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McHENRY, ILLINOIS 60050
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805
FAX: 815.385.1781 | HRGreen.com

McHenry County College

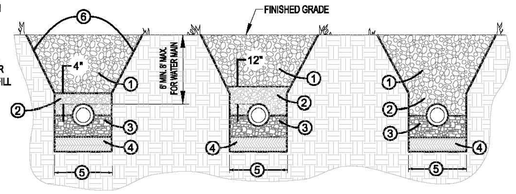
McHENRY COUNTY COLLEGE
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
EROSION CONTROL DETAILS

SHEET NO.
C-15

UG-03

1. TRENCH BACKFILL TO SUBGRADE AND WITHIN 2 FEET OF PROPOSED PAVEMENT, DRIVEWAY, CURB AND GUTTER OR SIDEWALK. TRENCH BACKFILL MATERIALS SHALL BE IDOT APPROVED GRADATION CA-6, GRADE 7, 8, OR 9 COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY. IN NON-STRUCTURAL AREAS BACKFILL WITH APPROVED EXCAVATED MATERIALS.
2. INITIAL BACKFILL TO DEPTH AS INDICATED. MATERIAL SHALL BE IDOT APPROVED GRADATION CA-6, GRADE 7, 8, OR 9.
3. PIPE BEDDING SHALL BE FRACTURED GRANULAR MATERIAL IDOT GRADATION CA-7 OR CA-11 FROM 4 INCHES BELOW HORIZONTAL CENTER OF PIPE.
4. UNSUITABLE MATERIAL TO BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH COMPACTED SUITABLE MATERIAL.
5. TRENCH WIDTH:
   PIPE O.D. + 12 INCHES MINIMUM
   PIPE I.D. + 18 INCHES MAXIMUM
6. CONTRACTORS SHALL COMPLY WITH THE LATEST OSHA STANDARDS INCLUDING, BUT NOT LIMITED TO: SLOPING AND BENCHING TRENCHING WALLS; TRENCH SUPPORT AND SHORING SYSTEMS; SHIELD SYSTEMS; AND HAZARDOUS ATMOSPHERES.



SECTION A:
WATER MAIN (DIP*)
FORCE MAIN (DIP*)
SANITARY SEWER MAIN & SERVICES (ESVCP,DIP*)

SECTION B:
SANITARY SEWER & SERVICES (PVC)
STORM SEWER (PVC)
SANITARY MAIN & WATER MAIN (HDPE)

SECTION C:
STORM SEWER (RCP)

* NOTE: ALL DUCTILE IRON SHALL BE SUBJECT TO POLY WRAP PER CITY ENGINEER

* FA-6 IS ALLOWED FOR TRENCH BACKFILL (ITEM #1)

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: TYPICAL TRENCH CROSS SECTION

Drawing Number: UG-03
Date: 6/1/2007
Drawn: EM Checked: LZ

CRYSTAL LAKE ILLINOIS Engineering Division

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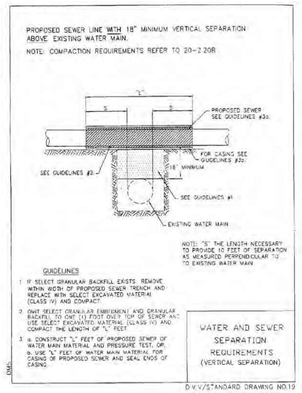
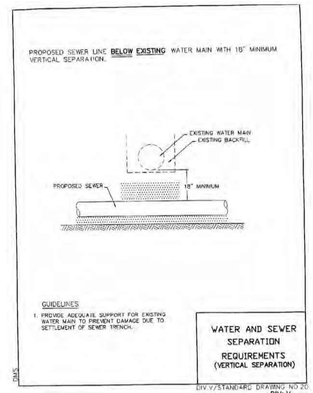
UG-04a





*THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", 5TH EDITION (SEE PAGES 160-173)

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: WATER AND SEWER SEPARATION REQUIREMENTS

Drawing Number: UG-04a
Date: 4/15/2007
Drawn: EM Checked: LZ

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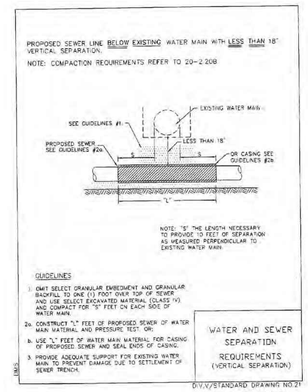
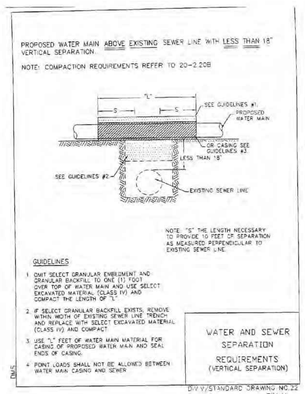
UG-04b





*THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", 5TH EDITION (SEE PAGES 160-173)

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: WATER AND SEWER SEPARATION REQUIREMENTS

Drawing Number: UG-04b
Date: 4/15/2007
Drawn: EM Checked: LZ

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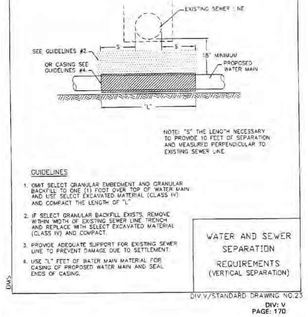
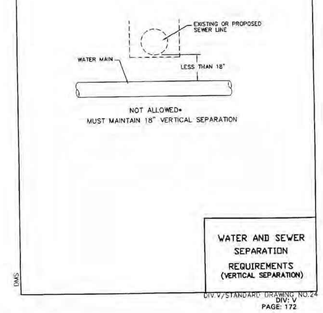
UG-04c





*THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", 5TH EDITION (SEE PAGES 160-173)

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: WATER AND SEWER SEPARATION REQUIREMENTS

Drawing Number: UG-04c
Date: 4/15/2007
Drawn: EM Checked: LZ

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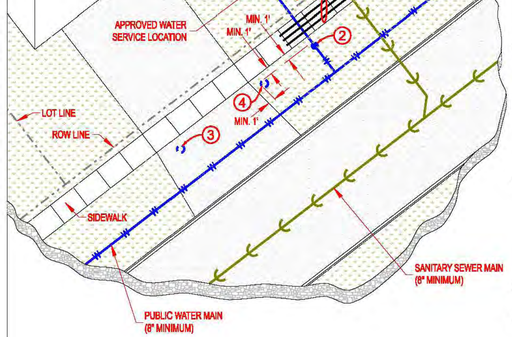
UG-05



NOTES:

1. 3 - No.4 STEEL REINFORCING BARS EXTENDING 3' BEYOND TRENCH OR MIN. 10' CENTERED OVER TRENCH.
2. WATER SHUTOFF BOX MAY NOT BE LOCATED IN PROPOSED DRIVEWAY, THE RELOCATED BOX SHALL BE LOCATED AT THE HOUSE SIDE OF THE DRIVEWAY AS PER DETAIL (CENTERED IN PARKWAY, PREFERRED - MIN. 1' FROM SIDEWALK ALLOWABLE).
3. CASE 1 - EXISTING SHUTOFF BOX IN PROPOSED DRIVEWAY:
   IF WATER SHUTOFF BOX RELOCATION IS REQUIRED, WATER MAIN SHOULD BE RETAPPED OUT OF PROPOSED DRIVEWAY LOCATION (MIN. 1' FROM DRIVEWAY). A CONTINUOUS LENGTH OF COPPER (NO COUPLINGS) SHALL BE RUN FROM THE NEW CORPORATION STOP TO THE RELOCATED SHUTOFF BOX. THE ABANDONED CORPORATION STOP SHALL BE CAPPED AND INSPECTED ACCORDING TO CITY WATER DIVISION STANDARDS.
4. CASE 2 - EXISTING SHUTOFF BOX OUTSIDE PROPOSED DRIVEWAY:
   IF WATER SHUTOFF BOX RELOCATION IS REQUIRED, THE EXISTING CORPORATION STOP MAY REMAIN. A CONTINUOUS LENGTH OF COPPER (NO COUPLINGS) SHALL BE RUN FROM THE CORPORATION STOP TO THE RELOCATED SHUTOFF BOX. RELOCATED BOX SHALL BE LOCATED MIN. 1' FROM DRIVEWAY.
5. 10' WATER AND SANITARY SERVICE SEPARATION (OR REFER TO COMMON TRENCH DETAIL).
6. FOR FAR SIDE SERVICES CONSULT THE CITY ENGINEER.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: TYPICAL WATER AND SANITARY SERVICE LOT LOCATION

Drawing Number: UG-05
Date: 4/15/2007
Drawn: EM Checked: LZ

CRYSTAL LAKE ILLINOIS Engineering Division

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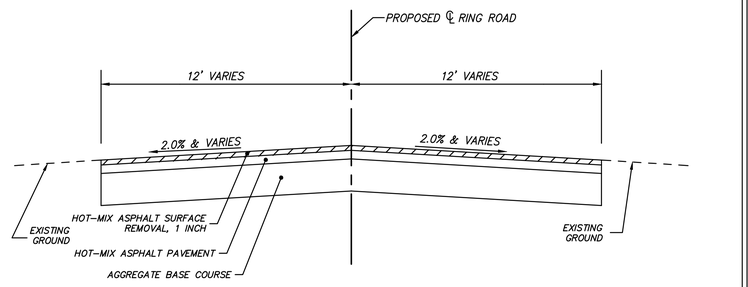
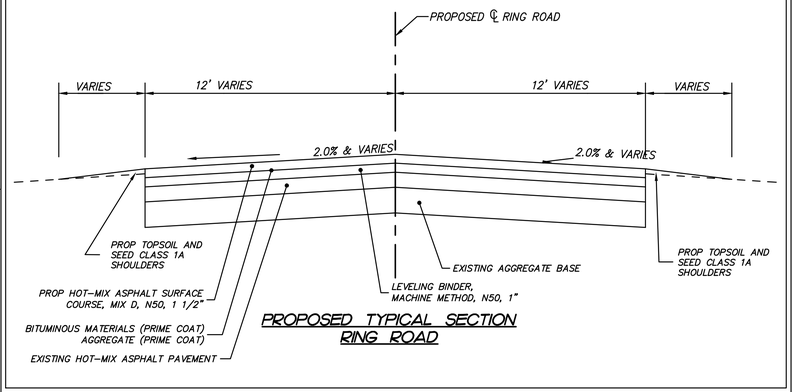
RING ROAD MILL AND OVERLAY TYPICAL SECTIONS



EXISTING TYPICAL SECTION
RING ROAD



PROPOSED TYPICAL SECTION
RING ROAD

DRAWN BY: MRJ JOB DATE: 2013
APPROVED: JFV JOB NUMBER: 86120379
CAD DATE: 5/20/2013 10:33:38 AM
CAD FILE: O:\86120379\CAD\Parking_Lot\Dwgs\C\86120379-Details.dwg

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
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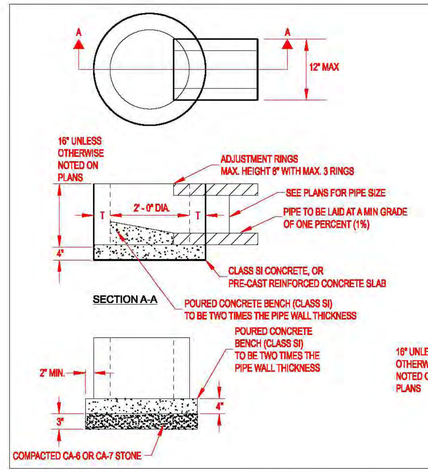
UD-01a



CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-3511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

ALTERNATE MATERIALS FOR WALLS	T
PRE-CAST REINFORCED CONCRETE SECTIONS	3"

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: DRAINAGE STRUCTURES: INLET, TYPE A

Drawing Number: UD-01a
Date: 4/15/2007
Drawn: EM Checked: LZ

CRYSTAL LAKE ILLINOIS Engineering Division

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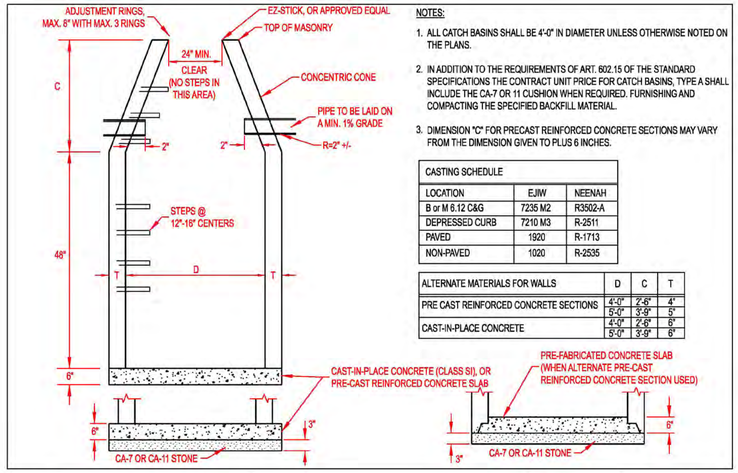
UD-01b



NOTES:

1. ALL CATCH BASINS SHALL BE 4'-0" IN DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.
2. IN ADDITION TO THE REQUIREMENTS OF ART. 602.15 OF THE STANDARD SPECIFICATIONS THE CONTRACT UNIT PRICE FOR CATCH BASINS, TYPE A SHALL INCLUDE THE CA-7 OR 11 CUSHION WHEN REQUIRED. FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL.
3. DIMENSION "C" FOR PRECAST REINFORCED CONCRETE SECTIONS MAY VARY FROM THE DIMENSION GIVEN TO PLUS 6 INCHES.

CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

ALTERNATE MATERIALS FOR WALLS	D	C	T
PRE CAST REINFORCED CONCRETE SECTIONS	4'-0"	2'-6"	4"
	5'-0"	3'-0"	5"
CAST-IN-PLACE CONCRETE	4'-0"	2'-6"	6"
	5'-0"	3'-0"	6"

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: CATCH BASIN, TYPE A

Drawing Number: UD-01b
Date: 4/15/2007
Drawn: EM Checked: LZ

CRYSTAL LAKE ILLINOIS Engineering Division

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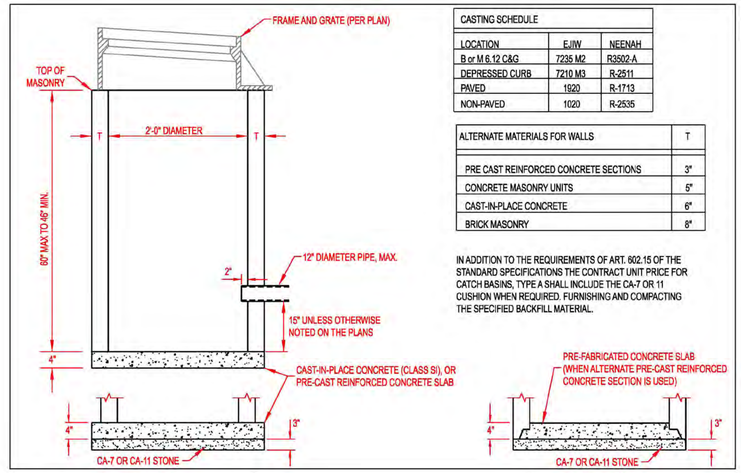
UD-01c



CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

ALTERNATE MATERIALS FOR WALLS	T
PRE CAST REINFORCED CONCRETE SECTIONS	3"
CONCRETE MASONRY UNITS	5"
CAST-IN-PLACE CONCRETE	6"
BRICK MASONRY	8"

IN ADDITION TO THE REQUIREMENTS OF ART. 602.15 OF THE STANDARD SPECIFICATIONS THE CONTRACT UNIT PRICE FOR CATCH BASINS, TYPE A SHALL INCLUDE THE CA-7 OR 11 CUSHION WHEN REQUIRED. FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: CATCH BASIN, TYPE C

Drawing Number: UD-01c
Date: 4/15/2007
Drawn: EM Checked: SC

CRYSTAL LAKE ILLINOIS Engineering Division

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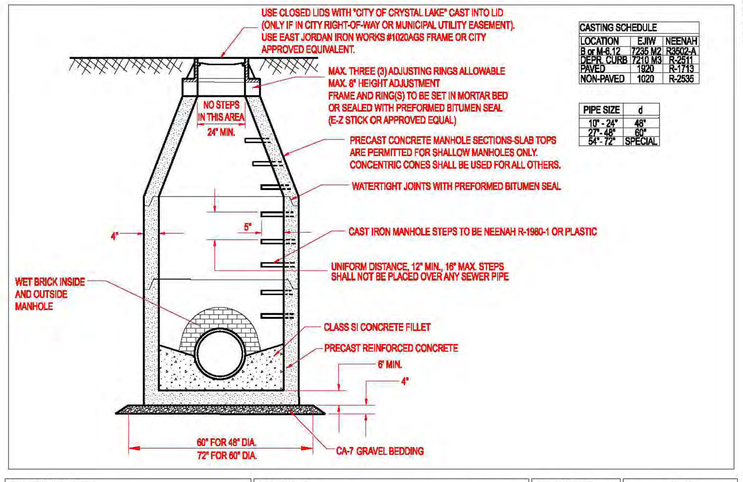
UD-01d



CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPR. CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

PIPE SIZE	d
10" - 24"	48"
27" - 48"	60"
54" - 72"	SPECIAL

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: STORM MANHOLE TYPE A

Drawing Number: UD-01d
Date: 4/15/2007
Drawn: EM Checked: LZ

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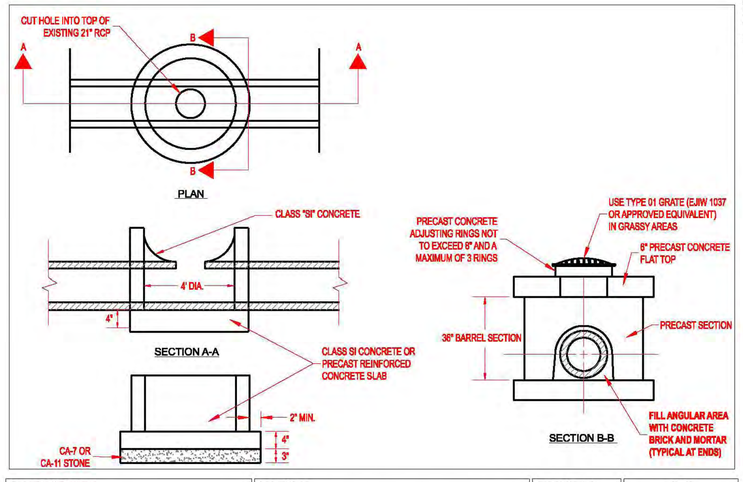
UD-01e



Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: 4-FOOT INLET WITH CONCRETE FLAT TOP

Drawing Number: UD-01e
Date: 4/15/2007
Drawn: EM Checked: LZ

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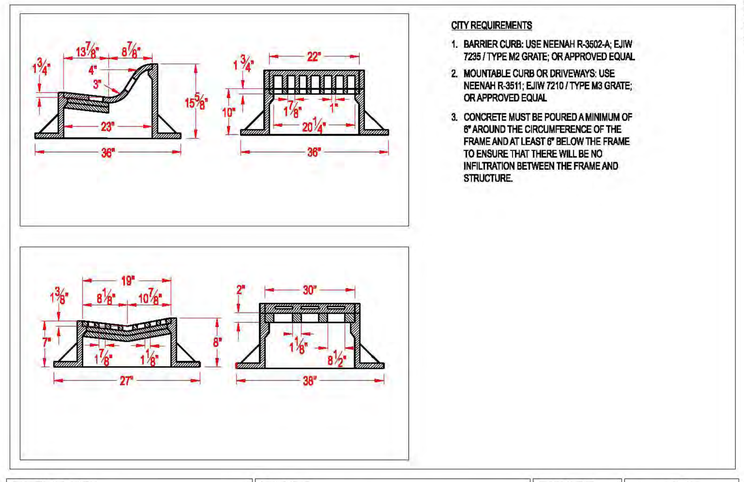
UD-02a



CITY REQUIREMENTS

1. BARRIER CURB: USE NEENAH R-3502-A; EJIW 7235 / TYPE M2 GRATE; OR APPROVED EQUAL
2. MOUNTABLE CURB OR DRIVEWAYS: USE NEENAH R-3511; EJIW 7210 / TYPE M3 GRATE; OR APPROVED EQUAL
3. CONCRETE MUST BE POURED A MINIMUM OF 8" AROUND THE CIRCUMFERENCE OF THE FRAME AND AT LEAST 6" BELOW THE FRAME TO ENSURE THAT THERE WILL BE NO INFILTRATION BETWEEN THE FRAME AND STRUCTURE.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: CURB INLET FRAME AND GRATE

Drawing Number: UD-02a
Date: 11/2/2007
Drawn: EM Checked: TH

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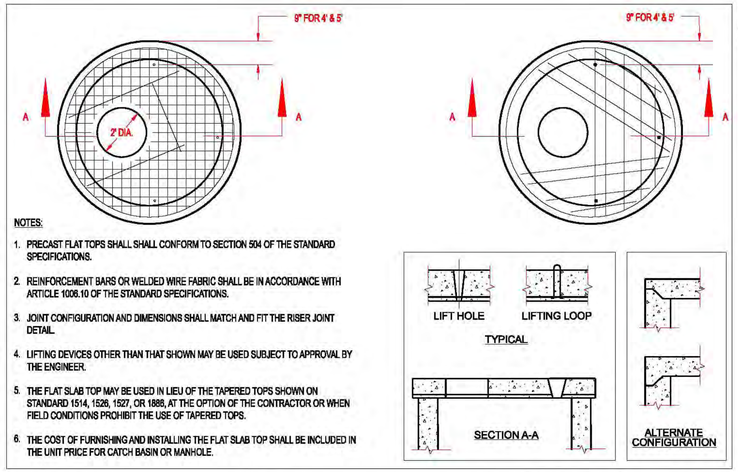

NOTES:

1. PRECAST FLAT TOPS SHALL SHALL CONFORM TO SECTION 504 OF THE STANDARD SPECIFICATIONS.
2. REINFORCEMENT BARS OR WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ARTICLE 1006.10 OF THE STANDARD SPECIFICATIONS.
3. JOINT CONFIGURATION AND DIMENSIONS SHALL MATCH AND FIT THE RISER JOINT DETAIL.
4. LIFTING DEVICES OTHER THAN THAT SHOWN MAY BE USED SUBJECT TO APPROVAL BY THE ENGINEER.
5. THE FLAT SLAB TOP MAY BE USED IN LIEU OF THE TAPERED TOPS SHOWN ON STANDARD 1514, 1526, 1527, OR 1888, AT THE OPTION OF THE CONTRACTOR OR WHEN FIELD CONDITIONS PROHIBIT THE USE OF TAPERED TOPS.
6. THE COST OF FURNISHING AND INSTALLING THE FLAT SLAB TOP SHALL BE INCLUDED IN THE UNIT PRICE FOR CATCH BASIN OR MANHOLE.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: ECCENTRIC FLAT TOPS FOR CURB INLET STORM MANHOLES

Drawing Number: UD-02b
Date: 4/15/2007
Drawn: EM Checked: LZ

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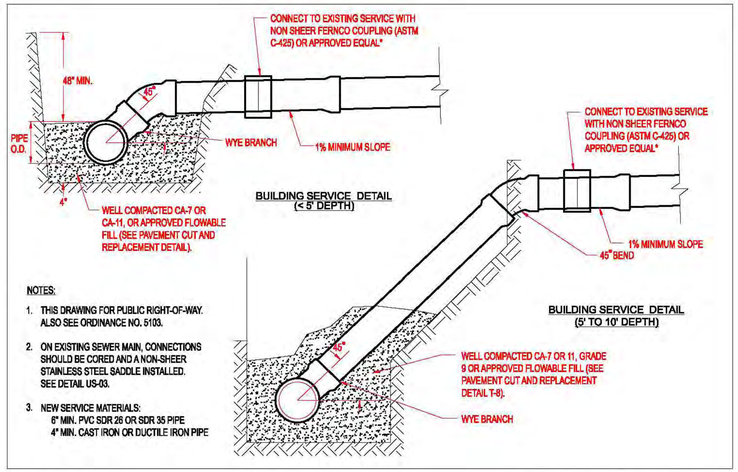

NOTES:

1. THIS DRAWING FOR PUBLIC RIGHT-OF-WAY. ALSO SEE ORDINANCE NO. 5103.
2. ON EXISTING SEWER MAIN, CONNECTIONS SHOULD BE CORED AND A NON-SHEER STAINLESS STEEL SADDLE INSTALLED. SEE DETAIL US-03.
3. NEW SERVICE MATERIALS:
   6" MIN. PVC SDR 26 OR SDR 35 PIPE
   4" MIN. CAST IRON OR DUCTILE IRON PIPE

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: SANITARY SERVICE RISER (DEPTH < 10')

Drawing Number: US-01
Date: 4/15/2007
Drawn: EM Checked: TH

CRYSTAL LAKE ILLINOIS Engineering Division

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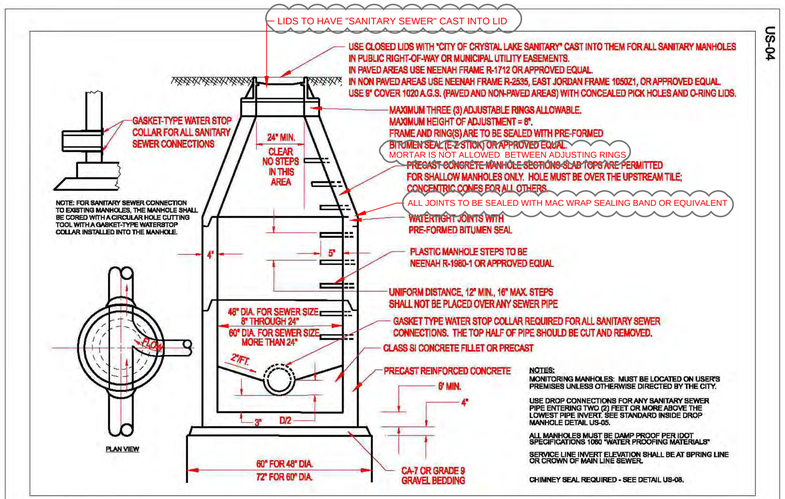
US-04



Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: STANDARD SANITARY AND MONITORING MANHOLE

Drawing Number: US-04
Date: 11/2/2007
Drawn: EM Checked: TH

CRYSTAL LAKE ILLINOIS Engineering Division

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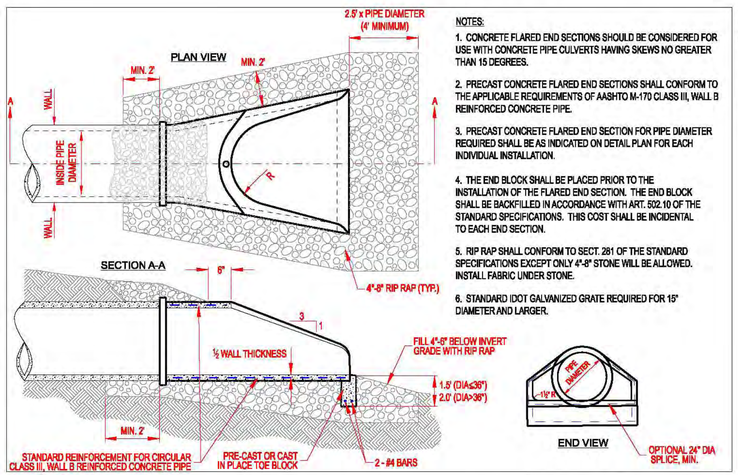
UD-02d



NOTES:

1. CONCRETE FLARED END SECTIONS SHOULD BE CONSIDERED FOR USE WITH CONCRETE PIPE CULVERTS HAVING SKEWS NO GREATER THAN 15 DEGREES.
2. PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-170 CLASS III, WALL B REINFORCED CONCRETE PIPE.
3. PRECAST CONCRETE FLARED END SECTION FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.
4. THE END BLOCK SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE FLARED END SECTION. THE END BLOCK SHALL BE BACKFILLED IN ACCORDANCE WITH ART. 502.10 OF THE STANDARD SPECIFICATIONS. THIS COST SHALL BE INCIDENTAL TO EACH END SECTION.
5. RIP RAP SHALL CONFORM TO SECT. 281 OF THE STANDARD SPECIFICATIONS EXCEPT ONLY 4"-8" STONE WILL BE ALLOWED. INSTALL FABRIC UNDER STONE.
6. STANDARD IDOT GALVANIZED GRATE REQUIRED FOR 15" DIAMETER AND LARGER.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: FLARED END SECTION (PRECAST CONCRETE PIPE)

Drawing Number: UD-02d
Date: 4/15/2007
Drawn: EM Checked: LZ

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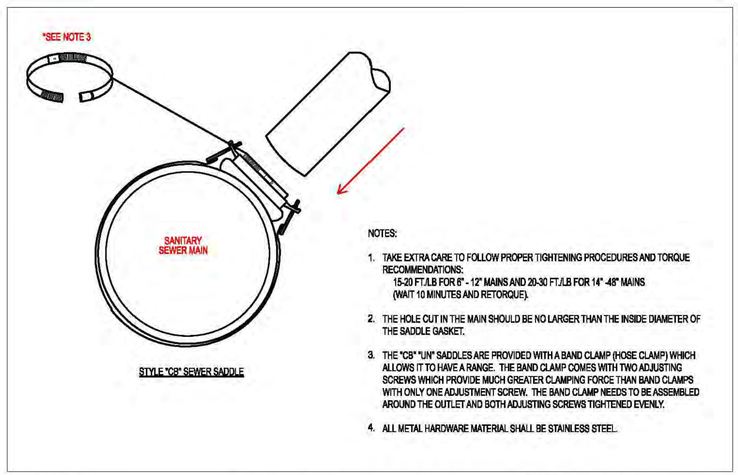
US-03



NOTES:

1. TAKE EXTRA CARE TO FOLLOW PROPER TIGHTENING PROCEDURES AND TORQUE RECOMMENDATIONS:
   15-20 FT./LB FOR 6" - 12" MAINS AND 20-30 FT./LB FOR 14" -48" MAINS
   (WAIT 10 MINUTES AND RETORQUE).
2. THE HOLE CUT IN THE MAIN SHOULD BE NO LARGER THAN THE INSIDE DIAMETER OF THE SADDLE GASKET.
3. THE "CS" "UN" SADDLES ARE PROVIDED WITH A BAND CLAMP (HOSE CLAMP) WHICH ALLOWS IT TO HAVE A RANGE. THE BAND CLAMP COMES WITH TWO ADJUSTING SCREWS WHICH PROVIDE MUCH GREATER CLAMPING FORCE THAN BAND CLAMPS WITH ONLY ONE ADJUSTMENT SCREW. THE BAND CLAMP NEEDS TO BE ASSEMBLED AROUND THE OUTLET AND BOTH ADJUSTING SCREWS TIGHTENED EVENLY.
4. ALL METAL HARDWARE MATERIAL SHALL BE STAINLESS STEEL.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: SANITARY SEWER SADDLE CONNECTION

Drawing Number: US-03
Date: 4/15/2007
Drawn: EM Checked: TH

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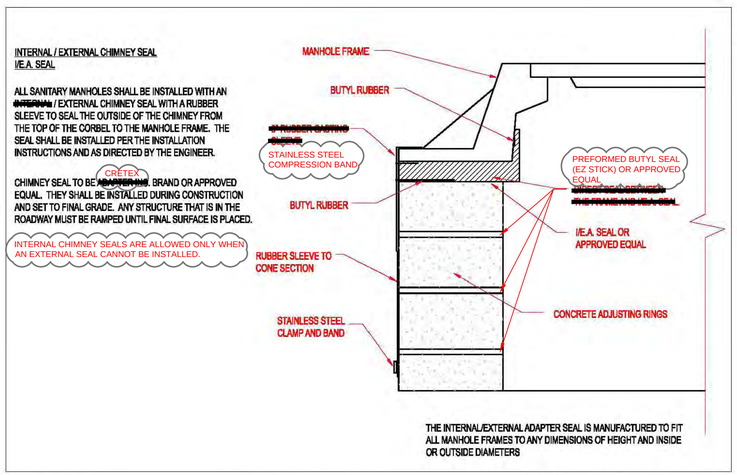
US-08



Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: INTERNAL / EXTERNAL CHIMNEY SEAL

Drawing Number: US-08
Date: 4/15/2007
Drawn: EM Checked: TH

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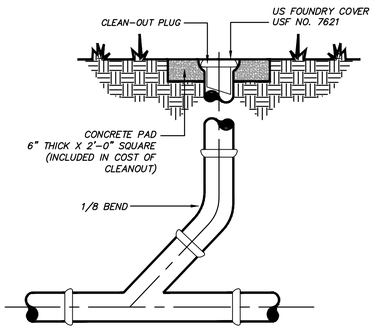
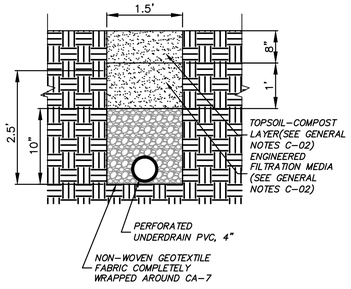
SHEET NO.
C-18



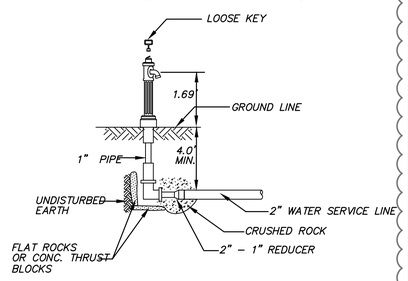
SAN./ STORM C.O.
NOT TO SCALE



UNDERDRAIN DETAIL

YARD HYDRANT DETAIL

A-411 MUELLER POST TYPE FIRE HYDRANT WITH ZONE HOSE NOZZLE AND 2" SHOE. OR APPROVED EQUAL (FROST FREE, NON-FREEZING)



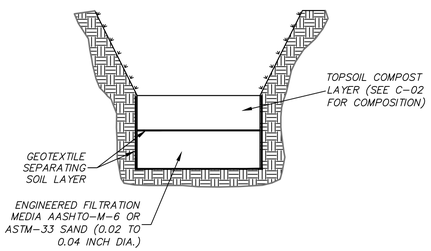
Hydrants shall be self-draining, non-freezing, compression type with 1" main valve opening. Inlet connection shall be 1" Outlet shall be 1"

Hydrants shall be set in 4 cubic feet of crushed stone to allow for proper drainage of the hydrant. Recommendations of the AWWA should be followed when installing the hydrants.

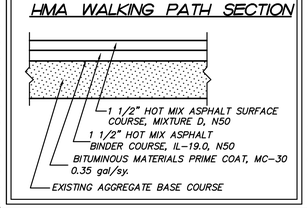
All Yard Hydrants shall have loose key as opposed to handle for security.

YARD-HYDRANT

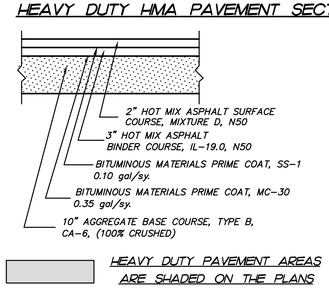
INFILTRATION BASIN BOTTOM SOIL DETAIL



HMA WALKING PATH SECTION

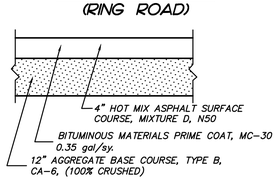


HEAVY DUTY HMA PAVEMENT SECTION



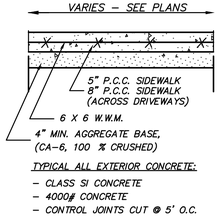
HEAVY DUTY PAVEMENT AREAS ARE SHADED ON THE PLANS

CLASS "D" PATCH (RING ROAD)



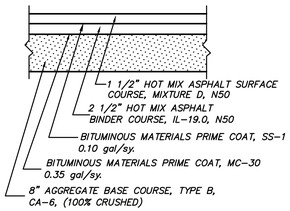
SIDEWALK/PATIO SECTION

VARIES - SEE PLANS

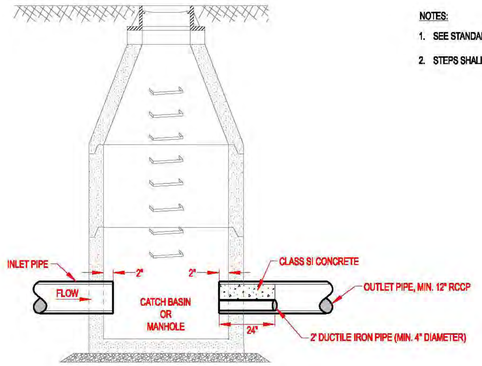


TYPICAL ALL EXTERIOR CONCRETE:
- CLASS SI CONCRETE
- 4000# CONCRETE
- CONTROL JOINTS CUT @ 5' O.C.

STANDARD DUTY HMA PAVEMENT SECTION



UD-02c



NOTES:
1. SEE STANDARD DETAILS FOR MANHOLE OR CATCH BASIN.
2. STEPS SHALL NOT BE PLACED OVER ANY SEWER PIPE

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	RESTRICTOR	UD-02c	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 4/15/2007	
		Drawn EM / Checked LZ	

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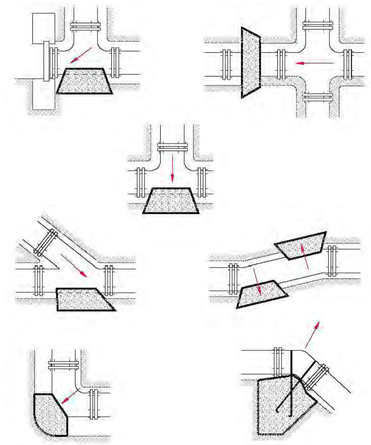
UW-03



BEARING AREA (SQ. FT.)					
PIPE SIZE	TEE/PLUG	90°	45°	21 1/2°	11 1/4°
6	4	2	1	1	1
8	6	4	3	1	1
10	7	5	3	2	1
12	8	6	4	3	2
14	12	9	6	4	3
16	15	12	7	5	3
18	18	15	9	5	4
24	40	30	15	10	5

NOTES:

ALL BLOCKING SHALL BE POURED CLASS SI CONCRETE AGAINST UNDISTURBED EARTH.

ALL BENDS OR ELBOWS GREATER THAN 11 1/4° SHALL HAVE THRUST BLOCKING. FORM AS TO NOT COVER BOLTS.

IN LEU OF THRUST BLOCKING "MEGA LUG" (EBAA) JOINT RESTRAINTS OR APPROVED EQUAL CAN BE USED AS APPROVED BY THE ENGINEER.

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	THRUST BLOCK INSTALLATION	UW-03	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 4/15/2007	
		Drawn EM / Checked JN	

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P.O. BOX 10385
PORTLAND, OREGON 97296-0385
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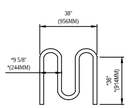

BR 5
50 LBS

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. *DIMENSIONS APPLY FOR ALL RACKS. OPTIONAL HEIGHT OF 42" (1067MM) IS AVAILABLE.
4. THE MODEL NUMBERS INDICATE THE NUMBER OF BIKES EACH BIKE RACK HOLDS.
5. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 096-001B

BR SERIES BIKE RACKS
5 BIKE CAPACITY

096-001b

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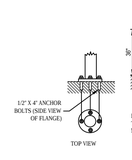
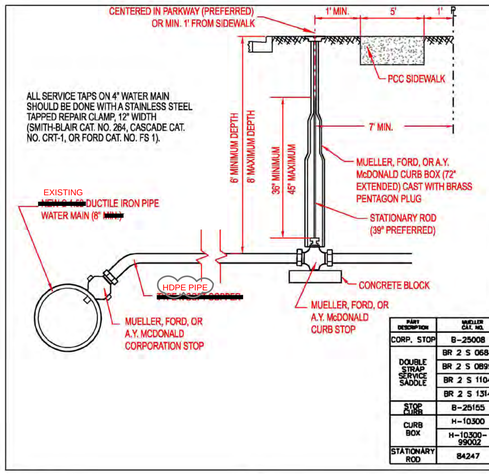


NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. REFER TO DRAWING NUMBER 096-001 TO 096-004 FOR RACK TYPE OPTIONS.
4. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 096-005

FLANGE MOUNT AND IN-GROUND MOUNT
BIKE RACK INSTALLATION OPTIONS

096-005

UW-04



ALL SERVICE TAPS ON 4" WATER MAIN SHOULD BE DONE WITH A STAINLESS STEEL TAPPED REPAIR CLAMP, 1/2" WIDTH (SMITH-BLAIR CAT. NO. 264, CASCADE CAT. NO. CRT-1, OR FORD CAT. NO. FS 1).

NOTES:
1. NO CORPORATION STOPS OR CURB BOXES MAY BE LOCATED UNDER PAVED AREAS INCLUDING DRIVES AND SIDEWALKS
2. ALL WATER MAIN HARDWARE SHALL BE MUELLER, A.Y. McDONALD, OR FORD.
3. SERVICE TO BE CONTINUOUS WITHOUT JOINTS FROM CORPORATION STOP TO CURB STOP.
4. MULTIPLE TAPS INTO MAIN SHALL BE NO CLOSER THAN 2' APART.
5. TRENCH FROM MAIN TO BACK OF SIDEWALK TO BE COMPACTED TRENCH BACKFILL.
6. NO FLARE FITTINGS WILL BE ACCEPTED.
7. ALL CURB BOX ADJUSTMENTS TO BE MADE WITH GALVANIZED PIPE AND COUPLINGS (SCREWED ON)
8. ALL COPPER TO BE REAMED BOTH INSIDE AND OUTSIDE AFTER CUTTING.
9. B-BOXES (TWO OR MORE) FOR ALL MULTI-UNIT BUILDINGS MUST BE CLEARLY AND PERMANENTLY LABELED BY WELDING THE UNIT NUMBER/LETTER ONTO THE B-BOX TOP

PART DESCRIPTION	MUELLER CAT. NO.	FORD CAT. NO.	A.Y. McDONALD CAT. NO.	SERVICE SIZE
CORP. STOP	B-25008	FB1000-Q	4701BQ	
DOUBLE STRAP SERVICE SADDLE	BR 2 S 0684 CC	202BS-750-CC	3855 6	
	BR 2 S 0899 CC	202BS-962-CC	3855 8	
	BR 2 S 1104 CC	202BS-1212-CC	3855 10	
	BR 2 S 1314 CC	202BS-1438-CC	3855 12	
STOP CURB	B-25155	B44-M-Q	6104Q	
CURB BOX	H-10300	EM2-60-56	5614	1" & 1.25" A.Y. McD.
	H-10300-99KH	EM2-60-57	5615	1.25" FORD, 1.5" & 2"
STATIONARY ROD	84247	ROD-36	5660	

Approved: City Engineer	Drawing Name	Drawing Number	
Victor C. Ramirez, P.E. Director of Engineering and Building	WATER SERVICE INSTALLATION	UW-04	CRYSTAL LAKE ILLINOIS Engineering Division
		Date: 4/15/2007	
		Drawn EM / Checked JN	

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DRAWN BY: MRJ JOB DATE: 2013
APPROVED: JFV JOB NUMBER: 86120379
CAD DATE: 5/20/2013 10:33:38 AM
CAD FILE: O:\86120379\CAD\Parking_Lot\Dwgs\C\86120379-Details.dwg

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	05/17/13	TMR	PER CITY COMMENTS

HRGreen
ILLINOIS DESIGN FIRM # 184.001322
420 N. FRONT STREET, SUITE 100
McHENRY, ILLINOIS 60050
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805
FAX: 815.385.1781 | HRGreen.com

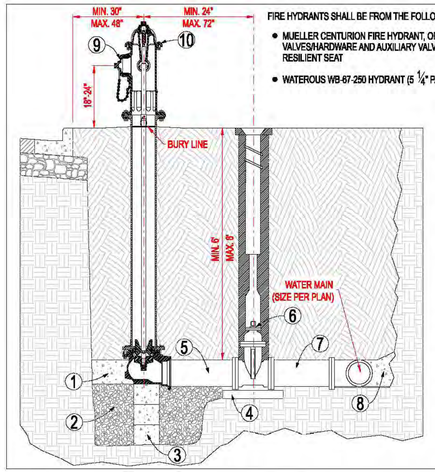
McHenry County College

McHENRY COUNTY COLLEGE
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

CIVIL
STANDARD CONSTRUCTION DETAILS

SHEET NO.
C-19

UW-06



FIRE HYDRANTS SHALL BE FROM THE FOLLOWING LIST, AS APPROVED BY THE CITY:

- MUELLER CENTURION FIRE HYDRANT, OPT-094 (5 ¼" BARREL) WITH MUELLER VALVES/HARDWARE AND AUXILIARY VALVE 6" GATE VALVE NO. 2360-23-8020 MODIFIED WEDGE RESILIENT SEAT
- WATEROUS WB-67-250 HYDRANT (5 ¼" PACER) WITH SERIES 2500-1 RESILIENT WEDGE GATE VALVE

1. PROVIDE CLASS SI CONCRETE BASE AND BLOCKING AGAINST UNDISTURBED EARTH
2. DRAIN SUMP TO BE ¾ CUBIC YARD OF ¾" WASHED STONE
3. CONCRETE SUPPORT
4. CONCRETE BLOCK OR BRICK SUPPORT
5. PIPE AS REQUIRED TO MAINTAIN 24" SEPARATION AS SHOWN (DIRECT MECHANICAL JOINT CONNECTION IF APPROVED BY CITY)
6. RUBBER VALVE BOX STABILIZER
7. USE "CORTEN" STEEL TIE RODS BETWEEN AUXILIARY VALVE AND WATER MAIN (STAINLESS STEEL MAY BE REQUIRED BY THE CITY ENGINEER). ANY DISTANCE GREATER THAN 20' SHALL BE RODDED TO MEGA-LUG FLANGE. NO COUPLINGS ARE PERMITTED IN RODS.
8. CONCRETE BLOCKING CAST IN PLACE 3000 P.S.I.
9. 4 ½" PORT TO FACE PAVEMENT OR AS DIRECTED BY CITY ENGINEER
10. ALL NEWLY INSTALLED HYDRANTS MUST BE TOP COATED WITH RUST-OLEUM FIRE HYDRANT ENAMEL (COLOR = FIRE HYDRANT RED)
11. MIN. 48" BETWEEN HYDRANT AND ANY VERTICAL OBSTRUCTIONS.
12. MIN. 72" BETWEEN HYDRANT AND ANY LANDSCAPING WITH A MATURE HEIGHT GREATER THAN 12".
13. ALL VALVE AND HYDRANT HARDWARE MUST BE STAINLESS STEEL INCLUDING NUTS, BOLTS, AND WASHERS.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: FIRE HYDRANT

Drawing Number: UW-06
Date: 11/2/2007
Drawn: EM Checked: JN

CRYSTAL LAKE ILLINOIS Engineering Division

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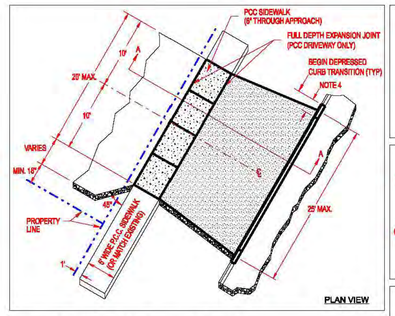
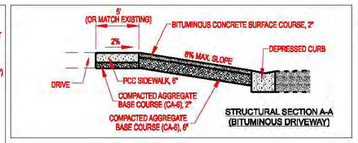
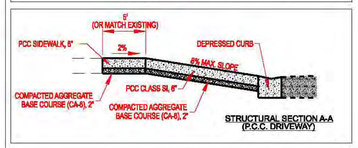
RD-01b



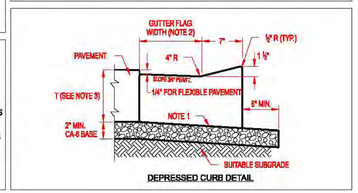
PLAN VIEW



STRUCTURAL SECTION A-A
(BITUMINOUS DRIVEWAY)



STRUCTURAL SECTION A-A
(P.C.C. DRIVEWAY)



DEPRESSED CURB DETAIL

1. SLOPE SAME AS SUB-BASE OR 3/4" PER FT WHEN SUB-BASE IS OMITTED
2. AS REQUIRED FOR PAVEMENT TYPE
3. THICKNESS OF PAVEMENT "T". WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENT, THE VERTICAL THICKNESS OF THE GUTTER FLAG SHALL BE 9 INCHES. FOR SAM PAVEMENT SECTIONS THE GUTTER FLAG SHALL BE 12".
4. TRANSITION FROM FULL CURB TO DEPRESSED CURB IN 1 TO 1.5 LINEAL FEET. ALSO, THE DRIVEWAY SHALL BE NO LESS THAN 3/4 OF THE DEPRESSION.
5. DRIVEWAY APPROACH SHALL MEET CURB AND GUTTER AT A POINT BETWEEN FULL CURB AND ONE-HALF CURB HEIGHT.
6. DRIVEWAY FLARE SHALL BE SYMMETRIC ABOUT THE DRIVEWAY CENTERLINE, AS MEASURED AT THE PROPERTY LINE, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
7. DRIVEWAY PAVEMENT SHALL BE AT LEAST 2 INCHES HOT MIX ASPHALT SURFACE AND 8 INCHES COMPACTED CA-6 GRADE B9 GRAVEL BASE.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: DRIVEWAY: RESIDENTIAL APPROACH

Drawing Number: RD-01b
Date: 4/15/2007
Drawn: EM Checked: LZ

CRYSTAL LAKE ILLINOIS Engineering Division

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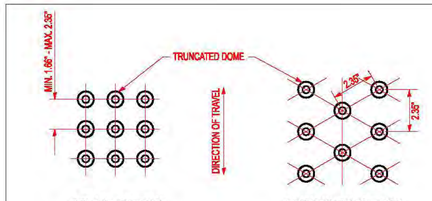
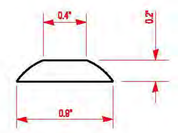
RD-03b



DETECTABLE WARNINGS DETAIL



TRUNCATED DOME DETAIL

NOTES:

1. THIS DETAIL IS TAKEN FROM ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) STANDARD 424001-04
2. DETECTABLE WARNINGS SHALL BE INSTALLED AT CURB RAMPS, MEDIANS AND PEDESTRIAN REFUGE ISLANDS, AT-GRADE RAILROAD CROSSINGS, TRANSIT PLATFORM EDGES, AND OTHER LOCATIONS WHERE PEDESTRIANS ARE REQUIRED TO CROSS A HAZARDOUS VEHICULAR WAY. DETECTABLE WARNINGS SHALL ALSO BE INSTALLED AT ALLEYS AND COMMERCIAL ENTRANCES WHEN PERMANENT TRAFFIC CONTROL DEVICES ARE PRESENT.
3. THE MAXIMUM SLOPE OF THE SIDE FLARE FOR TYPE B RAMPS SHALL BE 1V:10H; HOWEVER, IF THE WIDTH OF THE LANDING AREA BETWEEN THE TOP OF THE RAMP AND AN OBSTRUCTION IS LESS THAN 4.0' THEN THE MAXIMUM SLOPE SHALL BE 1V:12H.
4. ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISCPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
5. SEE RD-03a FOR ADDITIONAL SIDEWALK RAMP DETAILS.
6. SIDEWALK RAMPS AND DETECTABLE WARNINGS SHALL UTILIZE RED CONCRETE.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: SIDEWALK RAMPS: DETECTABLE WARNINGS (MODIFIED IDOT 424001-04)

Drawing Number: RD-03b
Date: 4/15/2007
Drawn: EM Checked: MS

CRYSTAL LAKE ILLINOIS Engineering Division

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UW-08

CITY OF CRYSTAL LAKE WATER MAIN CHLORINATION SPECIFICATIONS:

1. DISINFECTION OF WATER MAINS SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION, CURRENT EDITION
2. THE CITY ENGINEERING DIVISION AND WATER DIVISION SHALL BE NOTIFIED 48 HOURS IN ADVANCE FOR SCHEDULING OF ANY TESTING CHLORINATING, FLUSHING, OR SAMPLING.
3. ONLY CITY WATER DIVISION PERSONNEL MAY OPERATE WATER VALVES ON LIVE MAINS.
4. A WATER VALVE JUMPER IS REQUIRED TO MAINTAIN PRESSURE ON THE CHLORINATED LINES DURING THE SAMPLING PROCEDURE FOR PROPER INSTALLATION AND REQUIREMENTS SEE THE STANDARD WATER VALVE JUMPER DETAIL.
5. WATER MAINS SHALL BE FLUSHED WITH A MINIMUM VELOCITY OF 2.5 FPS.
6. THE INITIAL CHLORINE CONCENTRATION SHALL BE 50 mg/L WITH A MINIMUM 24 HOUR RESIDUAL OF 25 mg/L.
7. THE METHOD OF CHLORINE APPLICATION SHALL BE APPROVED BY THE CITY:
   a. LIQUID CHLORINE W/CHLORINATING DEVICE WITH BACKFLOW PREVENTER.
   b. CHLORINE BEARING COMPOUNDS IN WATER.
   c. TABLET DISINFECTION.
8. ALL NEW VALVES AND HYDRANTS SHALL BE OPERATED WHILE LINE IS BEING CHLORINATED.
9. THE CITY ENGINEERING DIVISION SHALL DETERMINE LOCATION AND QUANTITY OF CORPORATION STOPS FOR FLUSHING AND CHLORINATING.
10. THE FINAL FLUSHING RESIDUAL IN THE NEW CHLORINATED LINES SHALL BE BETWEEN 0.2 AND 2.0 mg/L.
11. ALL WATER SAMPLES SHALL BE COLLECTED ON TWO (2) CONSECUTIVE DAYS AND PASS BACTERIOLOGICAL TEST RESULTS. IN THE EVENT THAT THE FIRST SET OF SAMPLES TAKEN TWO (2) CONSECUTIVE DAYS APART FAIL TO PASS, ANOTHER SET OF SAMPLES MAY BE TAKEN TWO (2) DAYS APART (PER STATE SPECS). IF THE SECOND SET FAILS TO PASS TESTING, THEN THE PROCEDURE MUST BE REPEATED WITH THE MAIN BEING RECHLORINATED, REFLUSHED, AND RESAMPLED.
12. STATE CERTIFIED LAB MUST BE USED FOR SAMPLES.

CHLORINE REQUIREMENTS TO PRODUCE 50 mg/L CONCENTRATION IN 100 FEET OF PIPE-BY DIAMETER

PIPE SIZE IN INCHES	100% CHLORINE, LB.	1% CHLORINE SOLUTION, GALS.
4	0.027	0.33
6	0.061	0.73
8	0.108	1.30
10	0.170	2.04
12	0.240	2.88

NUMBER OF 5-GRAIN HYPOCHLORITE TABLETS REQUIRED FOR A DOSAGE OF 50mg/L PER LENGTH OF PIPE SECTION

PIPE SIZE IN INCHES	LENGTH OF PIPE SECTION IN FEET				
	UP TO 13	18	20	30	40
2	1	1	1	1	1
4	1	1	2	2	2
6	2	2	3	3	4
8	2	3	5	5	6
10	3	5	7	7	9
12	5	6	10	10	14

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: CHLORINATION SPECIFICATIONS

Drawing Number: UW-08
Date: 4/15/2007
Drawn: EM Checked: LZ

CRYSTAL LAKE ILLINOIS Engineering Division

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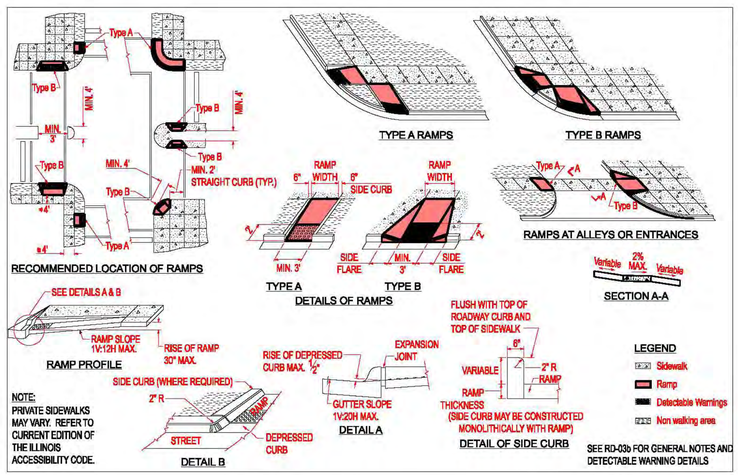
RD-03a



SEE RD-03b FOR GENERAL NOTES AND DETECTABLE WARNING DETAILS

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: PUBLIC SIDEWALK RAMP DETAIL (MODIFIED IDOT 424001-04)

Drawing Number: RD-03a
Date: 4/15/2007
Drawn: EM Checked: MS

CRYSTAL LAKE ILLINOIS Engineering Division

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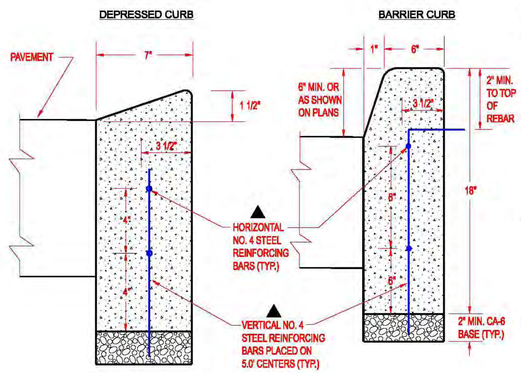
RD-05b



▲ BARS TO BE SET AND TIED PRIOR TO CONCRETE POUR. BAR PLACEMENT DURING POUR WILL NOT BE PERMITTED.

NOTES:

1. CONTRACTION JOINTS AND EXPANSION JOINTS SHALL BE INSTALLED IN THE CURB OR CURB AND GUTTER IN PROLONGATION WITH JOINTS IN ADJACENT P.C.C. PAVEMENT OR BASE COURSE.
2. WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENT, A 1" THICK PREFORMED EXPANSION JOINT FILLER, CONFORMING TO THE CROSS SECTION OF THE CURB AND GUTTER, SHALL BE INSTALLED AT POINTS OF CURVATURE FOR SHORT-RADIUS CURVES AND CONSTRUCTION JOINTS SHALL BE PLACED BETWEEN EXPANSION JOINTS AT DISTANCES NOT TO EXCEED 20 FEET.
3. ALL EXPANSION JOINTS SHALL BE INSTALLED WITH A 1 ½" DIAMETER x 18" COATED SMOOTH DOWEL BAR CONFORMING TO ART. 710.14b OF THE IDOT STANDARD SPECIFICATIONS. THE DOWEL BAR SHALL BE FITTED WITH A CAP HAVING A PINCHED STOP THAT WILL PROVIDE 1" OF EXPANSION.
4. ALL CONSTRUCTION JOINTS SHALL BE PROVIDED WITH 1/2" DIAMETER BAR CONFORMING TO AASHTO M-31 OR M-53. TIE BARS SHALL BE PLACED ON 9" CENTERS (MINIMUM 2 PER JOINT).
5. TRANSITIONS- THE TRANSITIONS FROM FULL HEIGHT CURB TO DEPRESSED CURB SHALL BE MADE AT THE RATE OF 3" PER FOOT OF LENGTH OR FLATTER.
6. EXPANSION JOINTS SHALL BE PLACED AT INTERVALS NOT TO EXCEED 100 FEET.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: CURB: CONCRETE CURB TYPE B

Drawing Number: RD-05b
Date: 4/15/2007
Drawn: EM Checked: MS

CRYSTAL LAKE ILLINOIS Engineering Division

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DRAWN BY: MRJ JOB DATE: 2013
APPROVED: JFV JOB NUMBER: 86120379
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BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
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FAX: 815.385.1781 | HRGreen.com

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CRYSTAL LAKE, ILLINOIS

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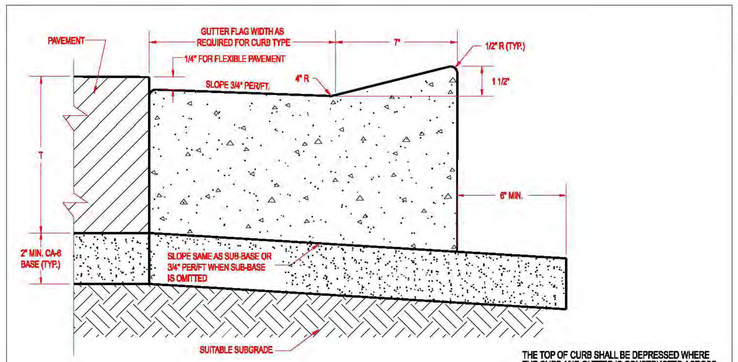
SHEET NO.
C-20

RD-04b



THE TOP OF CURB SHALL BE DEPRESSED WHERE THE CURB AND GUTTER IS CONSTRUCTED ACROSS ALLEYS AND FOR PRIVATE DRIVES OR WHERE DIRECTED BY THE ENGINEER.

THICKNESS OF PAVEMENT "T". WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENT, THE VERTICAL THICKNESS OF THE GUTTER FLAG SHALL BE 9 INCHES. FOR BAM PAVEMENT SECTIONS THE FLAG SHALL BE THE SAME THICKNESS AS THE PAVEMENT.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: DEPRESSED CURB: DETAIL

Drawing Number: RD-04b
Date: 4/15/2007
Drawn: EM Checked: MS

CRYSTAL LAKE ILLINOIS Engineering Division

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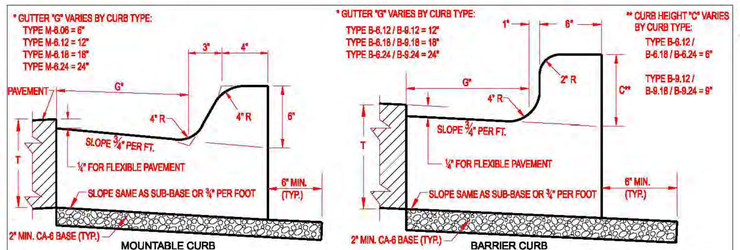
RD-05a



THICKNESS - T - Thickness of pavement when curb and gutter is constructed adjacent to flexible or rigid pavement, the vertical thickness of the gutter flag shall be 9". Also, tie bars shall be omitted.

DRAINAGE OPENINGS - At all locations where metal castings are to be incorporated in the curb and gutter, a 1" thick pre formed expansion joint filler, conforming to the cross sections of the curb and gutter, shall be installed in the curb and gutter a distance of 5 ft. from each side of the metal casting. When the width of the metal casting is less than the width of the curb and gutter, 2 - No. 4 rebars (L = 12 + casting length + 12") shall be incorporated in the continuous portion of concrete gutter in front of the casting.

TRANSITIONS - The transition from full height curb to depressed curb shall be made at the rate of 3" per foot of length or flatter.

(2) - No. 4 steel reinforcing bars shall be incorporated over trench crossings if required by the City Engineer.

JOINTS - In addition to the requirements of Article 606.06 of the Standard Specifications, joints shall be constructed as follows:

Contraction joints and expansion joints shall be installed in the curb or curb and gutter in prolongation with joints in adjacent P.C.C. pavement or base course.

When curb and gutter is constructed adjacent to flexible pavement, a 1" thick pre formed expansion joint filler, conforming to the cross section of the curb and gutter, shall be installed at points of curvature for short radius curves and at construction joints. Contraction joints shall be placed between expansion joints at distances not to exceed 5 feet.

All expansion joints shall be provided with a 1 1/4" dia. x 18" coated smooth dowel bar conforming to Article 1006.10 of the Standard Specifications. The dowel bar shall be fitted with a cap having a pinched stop that will provide 1" of expansion.

All construction joints shall be provided with 1/2" dia. deformed steel tie bars 30" long conforming to AASHTO M-31 or M-53. Tie bars shall be placed on 9" centers. (minimum 2 per joint).

Expansion joints shall be placed at intervals not to exceed 100 feet.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: CURB: CONCRETE CURB AND GUTTER

Drawing Number: RD-05a
Date: 6/1/2007
Drawn: EM Checked: MS

CRYSTAL LAKE ILLINOIS Engineering Division

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TR-03

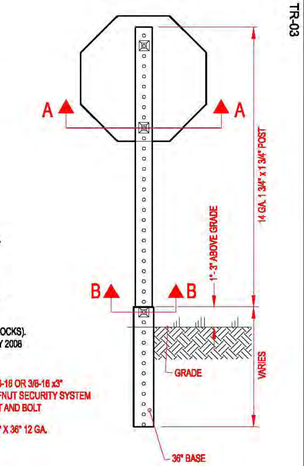
SPECIFICATIONS

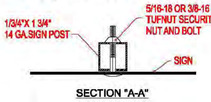
1. ALL TRAFFIC CONTROL SIGNS AND POSTS SHALL BE INSTALLED PRIOR TO OCCUPANCY AND SHALL BE INSTALLED ACCORDING TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 728 (LATEST EDITION), AND IDOT POLICY ON ESTABLISHING AND POSTING SPEED LIMITS ON THE STATE HIGHWAY SYSTEM, MAY 2002 EDITION (SPEED LIMIT SIGNS SPACING, PAGE 9).

2. POSTS SHALL BE TELESCOPING SIGN POSTS, 14 GAUGE 1 3/4" x 1 3/4" x 10' (OR 11' OR 12') WITH A 12 GAUGE 2" x 2" x 36" BASE. TELESCOPING SIGN SUPPORTS SHALL CONFORM TO SECTION 728 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).

3. MOUNTING HOLES SHALL BE 7/16" IN DIAMETER +/- 1/16" AND WILL BE SPACED 1" ON CENTER ON ALL SIDES FOR THE ENTIRE LENGTH OF THE POSTS. HOLES SHALL BE ON THE CENTERLINE OF EACH SIDE IN TRUE ALIGNMENT AND OPPOSITE EACH OTHER TO ACCEPT A 3/8" BOLT THROUGH THE POST AT ANY LOCATION. THE POST SHALL HAVE A SMOOTH GALVANIZED FINISH APPLIED EITHER BEFORE OR AFTER FORMING.

4. ALL SIGN PANELS SHALL BE IDOT STANDARD 0.080" ALUMINUM BLANKS WITH 1 1/2" RADIUS ON ALL CORNERS. SIGN FACE MATERIAL SHALL BE 3M DG3 REFLECTORIZED SHEETING (ASTM PROPOSED TYPE 11, ILLINOIS TYPE ZZ).
   - STANDARD STOP SIGN (R1-1), YIELD SIGN (R1-2), AND DO NOT ENTER (R5-1) SHALL BE 30" x 30"
   - STANDARD WARNING SIGNS SHALL BE 30" x 30"
   - NO PARKING SIGNS SHALL BE 12" x 18" (R7-2a)
   - SCHOOL ZONE AND PEDESTRIAN CROSSING SIGNS SHALL BE 30" x 30" WITH SUPPLEMENTAL PLATES 24" x 12"
   - SPEED LIMIT SIGNS SHALL BE 24" x 30" (R2-1)
     SPEED LIMIT SIGNS FOR 30-MPH OR LESS IN URBAN AREAS SHALL BE SPACED 600 FEET TO 1,320 FEET (2-4 BLOCKS). REFER TO IDOT POLICY ON ESTABLISHING AND POSTING SPEED LIMITS ON THE STATE HIGHWAY SYSTEM, MAY 2008 EDITION (SPEED LIMIT SIGNS SPACING, PAGE 5).





SECTION "A-A"

SECTION "B-B"

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: TRAFFIC CONTROL SIGN AND POST

Drawing Number: TR-03
Date: 4/15/2007
Drawn: EM Checked: TR

CRYSTAL LAKE ILLINOIS Engineering Division

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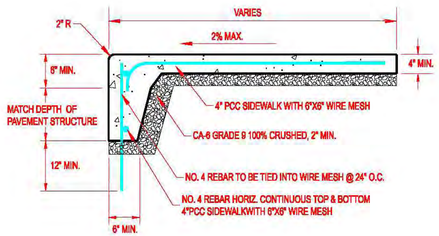
RD-05c



CLASS SI CONCRETE SHALL BE USED THROUGHOUT (UNLESS OTHERWISE NOTED)

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: CURB: SIDEWALK WITH INTEGRAL CURB

Drawing Number: RD-05c
Date: 4/15/2007
Drawn: EM Checked: MS

CRYSTAL LAKE ILLINOIS Engineering Division

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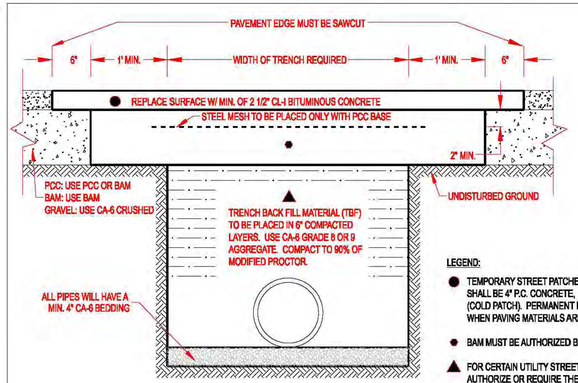
RD-06



LEGEND:

- TEMPORARY STREET PATCHES DURING WINTER CONSTRUCTION SHALL BE 4" P.C. CONCRETE, IDOT CLASS SI OR A MIN. 3" OF UPM (COLD PATCH). PERMANENT PATCHES SHALL BE COMPLETED WHEN PAVING MATERIALS ARE AVAILABLE.
- BAM MUST BE AUTHORIZED BY THE CITY ENGINEER.
- ▲ FOR CERTAIN UTILITY STREET CUTS, THE CITY ENGINEER MAY AUTHORIZE OR REQUIRE THE USE OF A CONTROLLED LOW-STRENGTH MATERIAL (CLSM) AS PER THE IDOT SPECIAL PROVISIONS.

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: PAVEMENT CUT AND REPLACEMENT

Drawing Number: RD-06
Date: 4/15/2007
Drawn: LZ Checked: EM

CRYSTAL LAKE ILLINOIS Engineering Division

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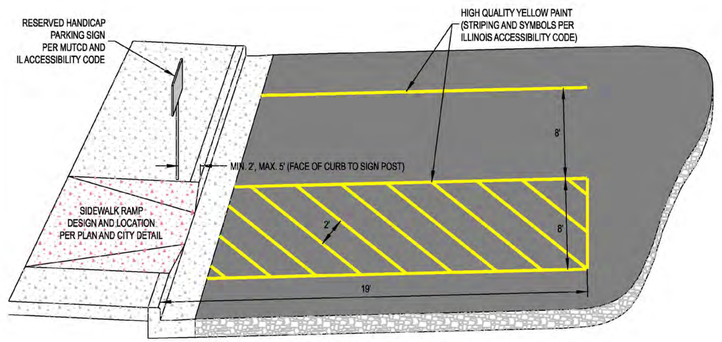
TR-06



NOTES:

1. MAX. SLOPE = 2%
2. CONCRETE PARKING BUMPERS REQUIRED IF BARRIER CURB NOT PRESENT.
3. REFER TO CURRENT EDITION OF THE ILLINOIS ACCESSIBILITY CODE, SECTION 400.310(c) AND ILLUSTRATIONS "B" (FIGURE 9), "C", AND "D".

Approved: City Engineer
Victor C. Ramirez, P.E.
Director of Engineering and Building

Drawing Name: TYPICAL HANDICAP ACCESSIBLE PARKING STALL

Drawing Number: TR-06
Date: 6/1/2007
Drawn: EM Checked: RP

CRYSTAL LAKE ILLINOIS Engineering Division

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DRAWN BY: MRJ JOB DATE: 2013
APPROVED: JFV JOB NUMBER: 86120379
CAD DATE: 5/20/2013 10:33:38 AM
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BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
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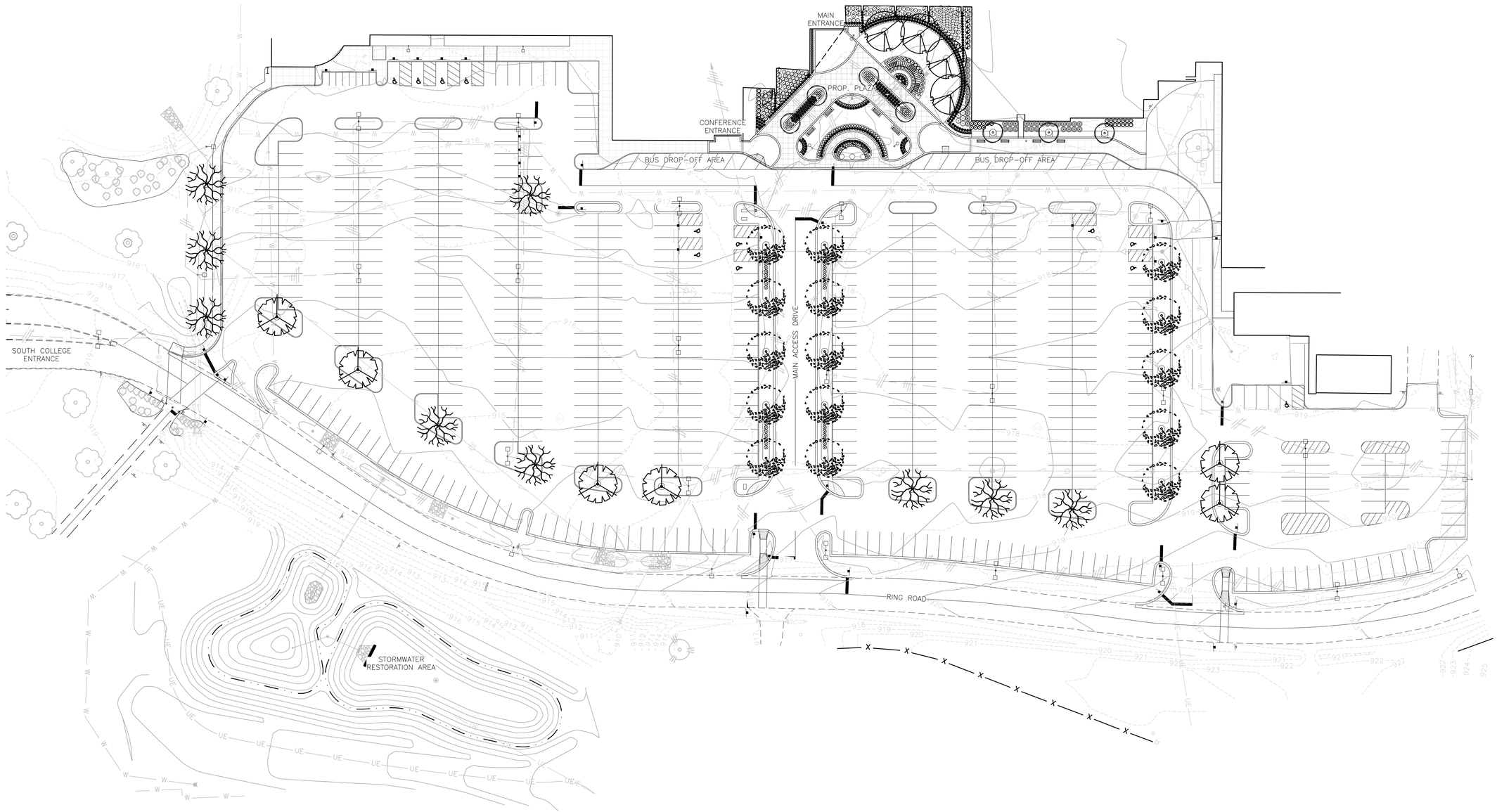
SHEET NO.
C-21



1 PLAN

SCALE: 1" = 40'-0"

NORTH

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

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JOB DATE:	2013
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JOB NUMBER:	86120379
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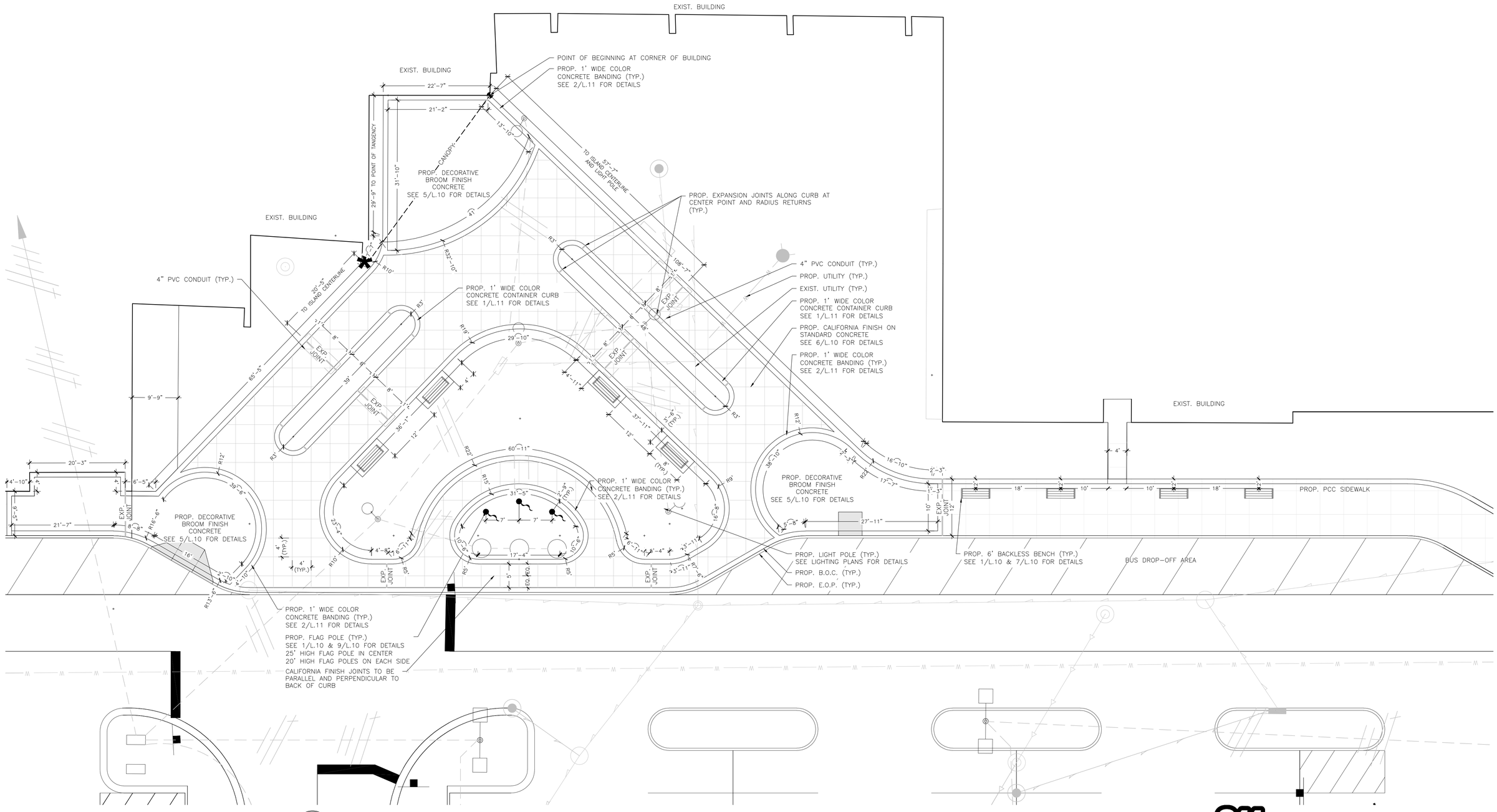
LANDSCAPE
OVERALL SITE PLAN

SHEET NO.
L.01

Xrefs: xg-1-dh01; xl-dsgn; 86120379-KCS-Dsgn-Lot_B-D; 86120379-XV-survey; E1.01; irrigation



1 PLAN

SCALE: 1" = 10'-0"

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

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APPROVED: DLR	JOB NUMBER: 86120379	0 1"	
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NO.	DATE	BY	REVISION DESCRIPTION
1	05/17/13	TMR	PER CITY COMMENTS

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CRYSTAL LAKE, ILLINOIS

LANDSCAPE
LAYOUT & DIMENSIONING PLAN – P1

SHEET NO.
L.02

Xrefs: xgl-1-dh01; xl-dsgn; 86120379-XCS-Dsgn-Lot_B-D; 86120379-XV-survey; E1.01; irrigation

EXIST. BUILDING

EXIST. BUILDING

PROP. TRASH RECEPTACLE & CONCRETE PAD (TYP.) SEE 1/L.10 & 8/L.10 FOR DETAILS

3'

4'-7"

4'-7"

CANOPY

EXIST. DECORATIVE BROOM FINISH CONCRETE

EXIST. BUILDING

57'-7"

R15'-6"

R6'-6"

CENTER BENCHES BETWEEN TRELLIS COLUMNS (TYP.) SET CENTER OF BACK OF BENCH 1' OFF EDGE OF CONCRETE

9'

15'

9'

4" PVC CONDUIT (TYP.)

EXIST. CONTAINER CURB

PROP. 6' BENCH WITH BACK (TYP.) SEE 1/L.10 & 7/L.10 FOR DETAILS

PROP. TRELLIS (TYP.) SEE 1/L.10 & 3-4/L.11 FOR DETAILS

PROP. UTILITY (TYP.)

EXIST. UTILITY (TYP.)

EXIST. CONTAINER CURB

4" PVC CONDUIT (TYP.)

EXIST. BUILDING

R4'

4'

PROP. TRASH RECEPTACLE & CONCRETE PAD (TYP.) SEE 1/L.10 & 8/L.10 FOR DETAILS

EXIST. DECORATIVE BROOM FINISH CONCRETE

EXIST. DECORATIVE BROOM FINISH CONCRETE

EXIST. PCC SIDEWALK

EXIST. FLAG POLE (TYP.)

EXIST. LIGHT POLE (TYP.)

EXIST. B.O.C. (TYP.)

EXIST. E.O.P. (TYP.)

BUS DROP-OFF AREA

PROP. TRASH RECEPTACLE SEE 1/L.10 & 8/L.10 FOR DETAILS

1 PLAN

SCALE: 1" = 10'-0"

NORTH

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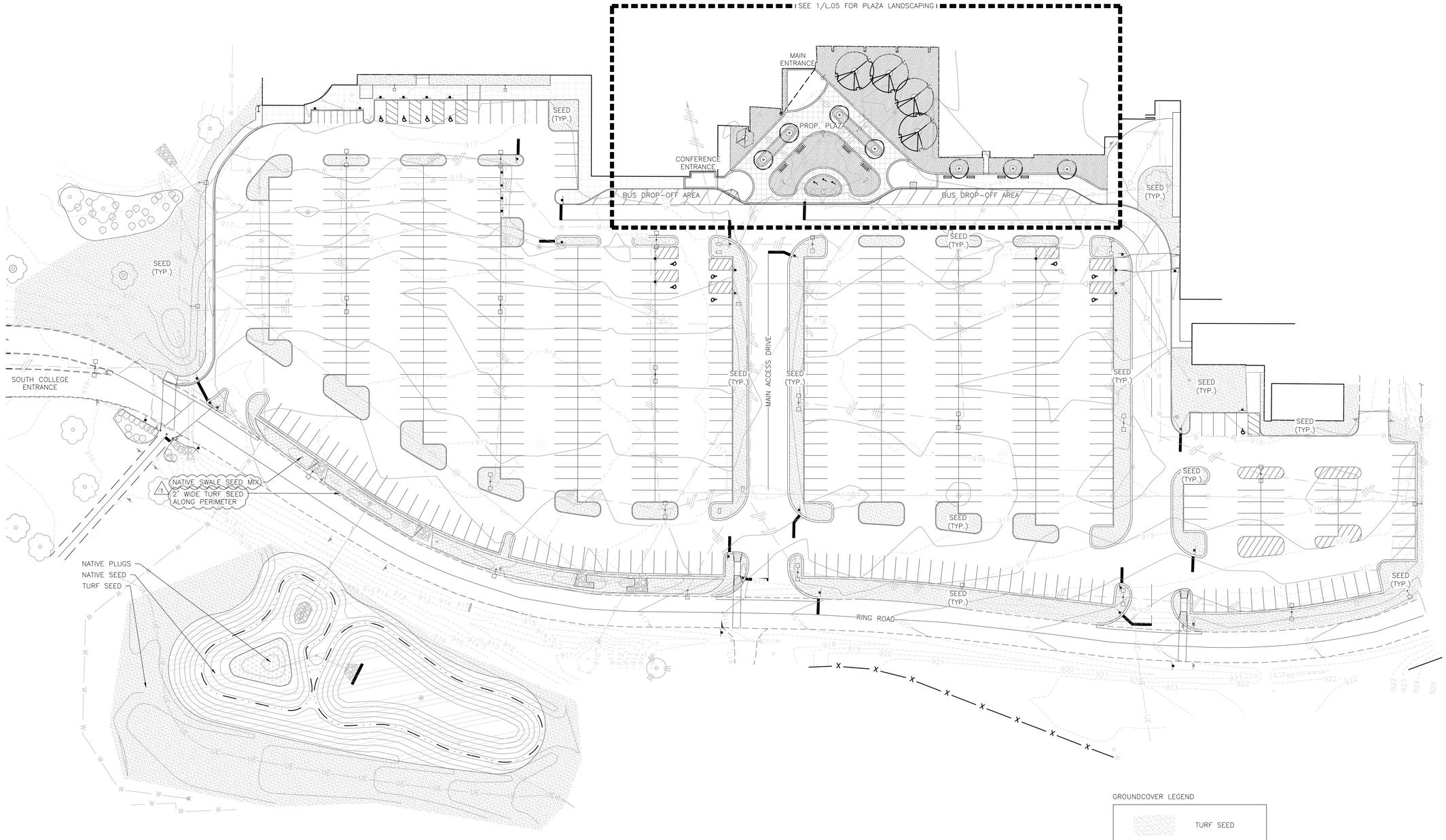
CRYSTAL LAKE, ILLINOIS

LANDSCAPE

LAYOUT & DIMENSIONING PLAN – P2

SHEET NO.
L.03

Xrefs: xgl-1-dh01, xl-dsgn; 86120379-XCS-Dsgn-Lot_B-0; 86120379-XV-survey; E1.01; irrigation



1 PLAN

SCALE: 1" = 40'-0"

NORTH

GROUNDCOVER LEGEND

- TURF SEED
- NATIVE SEED
- 1 NATIVE SWALE SEED MIX
- NATIVE PLUGS

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

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APPROVED:	DLR	JOB NUMBER:	86120379
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CRYSTAL LAKE, ILLINOIS

LANDSCAPE

LANDSCAPE PLAN – P1 PARKING LOT

SHEET NO. L.04

Xrefs: xg1-1-dh01; xl-dsgn; 86120379-XCS-Dsgn-Lot_B-D; 86120379-XV-survey; E1.01; irrigation

EXIST. BUILDING

EXIST. BUILDING

EXIST. BUILDING

EXIST. BUILDING

SEED

SEED

SEED

SEED

SEED

SEED

SEED

SEED

SEED

SEED

CANOPY

PROP. DECORATIVE BROOM FINISH CONCRETE

PROP. DECORATIVE BROOM FINISH CONCRETE

PROP. DECORATIVE BROOM FINISH CONCRETE

AC 1

PG 2
5' DIA. MULCH RING (TYP.)

PG 2
PROP. CONTAINER CURB
4" PVC CONDUIT (TYP.)

EQ. EQ. TYP.

PROP. UTILITY (TYP.)
EXIST. UTILITY (TYP.)
PROP. CONTAINER CURB
4" PVC CONDUIT (TYP.)

TC 4
PG 3

PROP. PCC SIDEWALK

PROP. LIGHT POLE (TYP.)
PROP. B.O.C. (TYP.)
PROP. E.O.P. (TYP.)

PROP. FLAG POLE (TYP.)

BUS DROP-OFF AREA

1 PLAN
SCALE: 1" = 10'-0"

NORTH

GROUNDCOVER LEGEND

TURF SEED

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

Xrefs: xgt-1-dh01; xl-dsgn; 86120379-XCS-Dsgn-Lot_B-D; 86120379-XV-survey; E1.01; irrigation

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APPROVED:	DLR	JOB NUMBER:	86120379
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McHENRY COUNTY COLLEGE
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

LANDSCAPE
LANDSCAPE PLAN – P1 PLAZA

SHEET NO.
L.05

MCHENRY COUNTY COLLEGE						
May 1, 2013						
MATERIALS SCHEDULE - PHASE 1						
QTY	KEY	BOTANICAL NAME/ITEM	COMMON NAME	SIZE	COND	REMARKS
DECIDUOUS TREES						
1	AC	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	8' HT.	B&B	MULTI-STEMMED
7	PG	PYRUS CALLERYANA 'GLEN'S FORM'	CHANTICLEER PEAR	2.5" CAL.	B&B	CENTRAL LEADER
4	TC	TILIA CORDATA 'GREENSPIRE'	LITTLELEAF LINDEN	2.5" CAL.	B&B	CENTRAL LEADER
MISCELLANEOUS						
2	MULCH			CY		
546	PLUGS	NATIVE PLUGS		EA		SPACE 18" OC
1 410	SEED	NATIVE SEED - CUSTOM LOW PROFILE SWALE MIX (CARDNO JFNEW)		SY		
3,057	SEED	NATIVE SEED - LOW PROFILE PRAIRIE MIX (CARDNO JFNEW)		SY		
1 9,564	SEED	TURF SEED - CLESEN PREMIUM MIX (ARTHUR CLESEN, INC.)		SY		

MCHENRY COUNTY COLLEGE - RESTORATION				
May 1, 2013				
PLUG MIX				
QTY	BOTANICAL NAME/ITEM	COMMON NAME	SIZE	REMARKS
78	ACORUS CALAMUS	SWEET FLAG	PLUG	SPACE 18" OC
78	ALISMA SUBCORDATUM	COMMON WATER PLANTAIN	PLUG	SPACE 18" OC
78	IRIS VIRGINICA	BLUE FLAG IRIS	PLUG	SPACE 18" OC
78	SAGITTARIA LATIFOLIA	COMMON ARROWHEAD	PLUG	SPACE 18" OC
78	CAREX COMOSA	BRISTLY SEDGE	PLUG	SPACE 18" OC
78	CAREX VULPINOIDEA	BROWN FOX SEDGE	PLUG	SPACE 18" OC
78	JUNCUS EFFUSUS	COMMON RUSH	PLUG	SPACE 18" OC
*PLANT IN GROUPINGS OF 5-10 OF THE SAME SPECIES				

REFER TO CARDNO JFNEW'S NATIVE PLANT NURSERY RESOURCE CATALOG FOR PLUG PLANTING AND MAINTENANCE SPECIFICATIONS

MCHENRY COUNTY COLLEGE - RESTORATION		
May 1, 2013		
NATIVE SEED MIX		
PLS OZ.	BOTANICAL NAME/ITEM	COMMON NAME
1	ASCLEPIAS SYRIACA	COMMON MILKWEED
0.9	ASTER LAEVIS	SMOOTH BLUE ASTER
0.7	ASTER OOLENTANGIENSIS	SKY-BLUE ASTER
0.8	BAPTISIA BRACTEATA	CREAM WILD INDIGO
0.9	BAPTISIA LACTEA	WHITE WILD INDIGO
45.3	BOUTELOUA CURTIPENDULA	SIDE-OATS GRAMA
4.2	CAREX BICKNELLII	COPPER-SHOULDERED OVAL SEDGE
7.5	CHAMAECRISTA FASCICULATA	PARTRIDGE PEA
4.5	COREOPSIS LANCEOLATA	SAND COREOPSIS
2.2	DALEA CANDIDA	WHITE PRAIRIE CLOVER
2.8	DALEA PURPUREA	PURPLE PRAIRIE CLOVER
10	ECHINACEA PURPUREA	BROAD-LEAVED PURPLE CONEFLOWER
66.5	ELYMUS CANADENSIS	CANADA WILD RYE
3.5	ERYNGIUM YUCCIFOLIUM	RATTLESNAKE MASTER
1.4	LESPEDEZA CAPITATA	ROUND-HEADED BUSH CLOVER
0.9	LIATRIS ASPERA	ROUGH BLAZING STAR
1.3	LIATRIS PYCNOSTACHYA	PRAIRIE BLAZING STAR
0.7	MONARDA FISTULOSA	WILD BERGAMOT
1.3	PARTHENIUM INTEGRIFOLIUM	WILD QUININE
0.3	POTENTILLA ARGUTA	PRAIRIE CINQUEFOIL
1	PYCNANTHEMUM VIRGINIANUM	COMMON MOUNTAIN MINT
4.9	RATIBIDA PINNATA	YELLOW CONEFLOWER
1.3	RUDBECKIA HIRTA	BLACK-EYED SUSAN
64	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM
1.4	SILPHIUM INTEGRIFOLIUM	ROSIN WEED
1.2	SOLIDAGO RIGIDA	STIFF GOLDENROD
0.5	SOLIDAGO SPECIOSA	SHOWY GOLDENROD
1.4	TRADESCANTIA OHIENSIS	COMMON SPIDERWORT
2	ZIZIA AUREA	GOLDEN ALEXANDERS
360	AVENA SATIVA	COMMON OAT
100	LOLIUM MULTIFLORUM	ANNUAL RYE

REFER TO CARDNO JFNEW'S NATIVE PLANT NURSERY RESOURCE CATALOG FOR SEED PLANTING AND MAINTENANCE SPECIFICATIONS

1

MCHENRY COUNTY COLLEGE - RESTORATION		
May 1, 2013		
NATIVE SWALE SEED MIX		
PLS OZ.	BOTANICAL NAME/ITEM	COMMON NAME
1.1	CAREX CRISTATELLA	CRESTED OVAL SEDGE
0.5	CAREX VULPINOIDEA	BROWN FOX SEDGE
15.1	ELYMUS VIRGINICUS	VIRGINIA WILD RYE
1.5	ASCLEPIAS INCARNATA	SWAMP MILKWEED
2.4	IRIS VIRGINICA	BLUE FLAG IRIS
0.8	LIATRIS SPICATA	MARSH BLAZING STAR
0.1	LOBELIA CARDINALIS	CARDINAL FLOWER
0.1	LOBELIA SIPHILITICA	GREAT BLUE LOBELIA
2.2	ZIZIA AUREA	GOLDEN ALEXANDERS
46	AVENA SATIVA	COMMON OAT
13	LOLIUM MULTIFLORUM	ANNUAL RYE

REFER TO CARDNO JFNEW'S NATIVE PLANT NURSERY RESOURCE CATALOG FOR SEED PLANTING AND MAINTENANCE SPECIFICATIONS

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3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING AWARE OF AND FIELD VERIFYING ALL RELATED EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING J.U.L.I.E., THE COUNTY PUBLIC WORKS DEPARTMENT, THE MUNICIPALITY AND ANY OTHER PUBLIC OR PRIVATE AGENCIES NECESSARY FOR UTILITY LOCATION PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF APPARENT CONFLICTS WITH CONSTRUCTION AND UTILITIES SO THAT ADJUSTMENTS CAN BE PLANNED PRIOR TO INSTALLATION. IF FIELD ADJUSTMENTS ARE NECESSARY DUE TO EXISTING UTILITY LOCATIONS THEY MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY AND ALL COSTS OR OTHER LIABILITIES INCURRED DUE TO DAMAGE OF SAID UTILITIES/STRUCTURES/ETC.
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7. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL PLANT MATERIAL WITH THE INSTALLATION OF OTHER IMPROVEMENTS SUCH AS HARDSCAPE ELEMENTS AND RELATED STRUCTURES. ANY DAMAGE TO EXISTING IMPROVEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.
8. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ALL AREAS OF THE SITE, OR ADJACENT AREAS, WHERE DISTURBED BY OPERATIONS OF OR RELATED TO THE CONTRACTOR'S WORK.
9. ALL SURFACE DRAINAGE SHALL BE DIVERTED AWAY FROM STRUCTURES AND NOTED SITE FEATURES IN ALL AREAS AT A MINIMUM OF 2% SLOPE AS SHOWN ON THE CIVIL ENGINEERING PLANS.
10. THE CONTRACTOR SHALL STAKE ALL TREE LOCATIONS AND THE PERIMETER OF SHRUB/PERENNIAL BEDS PRIOR TO INSTALLATION AND CONTACT THE OWNER'S REPRESENTATIVE FOR APPROVAL. FINAL LOCATION AND STAKING OF ALL PLANT MATERIALS SHALL BE ACCEPTED BY THE OWNER'S REPRESENTATIVE IN ADVANCE OF PLANTING.
11. IF CONFLICTS ARISE BETWEEN THE SIZE OF AREAS AND PLANS, THE CONTRACTOR IS REQUIRED TO CONTACT THE OWNER'S REPRESENTATIVE FOR RESOLUTION PRIOR TO INSTALLATION.
12. WHERE PROVIDED, AREA TAKEOFFS AND PLANT QUANTITY ESTIMATES IN THE PLANT LIST ARE FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE TO DO THEIR OWN QUANTITY TAKE-OFFS FOR ALL PLANT MATERIALS AND SIZES SHOWN ON PLANS. IN CASE OF ANY DISCREPANCIES, PLANS TAKE PRECEDENCE OVER CALL-OUTS AND/OR THE PLANT LIST(S).
13. ALL PLANTS SHALL BE NURSERY GROWN PLANTS MEETING AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA) STANDARDS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1-2004). PLANTS ARE TO BE TYPICAL IN SHAPE AND SIZE FOR SPECIES. PLANTS SHALL NOT BE ROOT-BOUND OR LOOSE IN THEIR CONTAINERS. HANDLE ALL PLANTS WITH CARE IN TRANSPORTING, PLANTING AND MAINTENANCE UNTIL INSPECTION AND FINAL ACCEPTANCE. FIELD COLLECTED MATERIAL SHALL NOT BE USED UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
14. SHREDDED HARDWOOD MULCH, FERTILIZING, AS SPECIFIED, STAKING, WATERING AND ONE (1) YEAR PLANT WARRANTY FOR INSTALLED PLANT MATERIAL, SHALL BE CONSIDERED INCIDENTAL TO THE PLANT ITEMS.
15. MUSHROOM COMPOST SHALL BE FINELY SCREENED, HOMOGENOUS, DECOMPOSED ORGANIC MATERIAL SUITABLE FOR HORTICULTURAL USE AS AVAILABLE FROM MIDWEST TRADING HORTICULTURAL SUPPLIES, INC. ST. CHARLES, IL 60174 (630) 365-1990 OR APPROVED EQUAL. MIX THOROUGHLY IN PLANT BED BEFORE INSTALLING PLANTS.
16. WARRANTY: ONE (1) YEAR REPLACEMENT WARRANTY FOR ALL PLANT MATERIALS SHALL BE CONSIDERED INCIDENTAL TO THIS PROJECT. WARRANTY SHALL COVER PLANTS WHICH HAVE DIED OR PARTIALLY DIED (THEREBY RUINING THEIR NATURAL SHAPE), BUT SHALL NOT INCLUDE DAMAGE BY VANDALISM, BROWSING, HAIL, ABNORMAL FREEZES, DROUGHT OR NEGLIGENCE BY THE OWNER. THE WARRANTY IS INTENDED TO COVER CONTRACTOR NEGLIGENCE, INFESTATIONS, DISEASE AND DAMAGE OR SHOCK TO PLANTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND WATERING THE PLANT MATERIAL AS NECESSARY, TO ENSURE GROWTH AND ESTABLISHMENT DURING THE 1-YEAR WARRANTY PERIOD. ANY PLANTS THAT ARE NOT IN A LIVE, HEALTHY, GROWING CONDITION AT THE END OF THE 1-YEAR WARRANTY PERIOD SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. PLANTS REPLACED UNDER WARRANTY WILL BE WARRANTED FOR ONE (1) YEAR FOLLOWING REPLACEMENT.

GENERAL NOTES – SPECIAL REQUIREMENTS– WARRANTY AND MAINTENANCE OF SEEDED AREAS

1. MOWING, TRIMMING AND REMOVAL OF GRASS CLIPPINGS IN TURF AREAS, DURING INITIAL 60 DAYS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DURING THIS TIME, CONTRACTOR SHALL MOW TURF AREAS AT REGULAR INTERVALS TO MAINTAIN AT A MAXIMUM HEIGHT OF 2-1/2 INCHES. DO NOT CUT MORE THAN 1/3 OF GRASS BLADE AT ANY ONE MOWING. CONTRACTOR SHALL ALSO NEATLY TRIM EDGES WHERE NECESSARY AND REMOVE CLIPPINGS AFTER MOWING AND TRIMMING.
2. WARRANTY:
   A. WARRANTY OF SEEDED AREAS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM.
   B. THE WARRANTY IS TO GUARANTEE COMPLETED SEED AREAS FOR A PERIOD OF 1 YEAR AFTER INITIAL ACCEPTANCE HAS BEEN DOCUMENTED.
   C. REPLACEMENT COSTS ARE THE CONTRACTOR'S RESPONSIBILITY, EXCEPT FOR THOSE RESULTING FROM LOSS OR DAMAGE DUE TO VANDALISM, CIVIL DISOBEDIENCE, ACTS OF NEGLECT ON THE PART OF OTHERS, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, FIRE, OR LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITY, OR BY "ACTS OF GOD."
3. MAINTENANCE:
   A. CONTRACTOR SHALL COORDINATE MAINTENANCE OPERATIONS AND ACTIVITIES WITH THE OWNER DURING THE WARRANTY PERIOD.
   B. MAINTENANCE OF SEED AREAS SHALL BE PERFORMED BY TRAINED PERSONNEL SKILLED IN IDENTIFYING DESIRED AND UNDESIRED PLANT MATERIAL.
   C. CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF SEEDED AREAS DURING THE 1 YEAR WARRANTY PERIOD WITH THE EXCEPTION OF ROUTINE MOWING OF TURF AREAS. ROUTINE MOWING OF TURF AREAS, DURING THE 1 YEAR WARRANTY PERIOD, WILL BE THE RESPONSIBILITY OF THE OWNER ONCE INITIAL ACCEPTANCE HAS BEEN DOCUMENTED.
   D. MAINTENANCE OF SEEDED AREAS SHALL INCLUDE:
      - WATERING TO PREVENT GRASS AND SOIL FROM DRYING OUT.
      - ROLLING THE SURFACE TO REMOVE MINOR DEPRESSIONS OR IRREGULARITIES.
      - CONTROLLING GROWTH OF WEEDS. APPLY HERBICIDES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REMEDY DAMAGE RESULTING FROM IMPROPER USE OF HERBICIDES.
      - PROTECTING SEEDED AREAS WITH WARNING SIGNS DURING MAINTENANCE AND WARRANTY PERIOD AS DEEMED NECESSARY.
      - IN THE SPRING OF EACH YEAR DURING THE 1 YEAR WARRANTY PERIOD, THE CONTRACTOR SHALL CORRECT AND RESEED AS ORIGINALLY SPECIFIED, ANY DEFECTS IN THE SEEDED AREAS AND GRASS STAND, SUCH AS WEEDY AREAS, ERODED AREAS, AND BARE SPOTS, UNTIL AFFECTED AREAS ARE ACCEPTABLE TO THE OWNER'S REPRESENTATIVE.
      - IN THE SPRING DURING THE 1 YEAR WARRANTY PERIOD, THE CONTRACTOR SHALL REPLACE OR REPAIR TO ORIGINAL CONDITION, ALL DAMAGES TO PROPERTY RESULTING FROM THE SEEDING OPERATION OR FROM THE REMEDYING OF DEFECTS, AT THE CONTRACTOR'S EXPENSE.

SPECIAL REQUIREMENTS – WARRANTY

A. A WARRANTY IS REQUIRED TO GUARANTEE COMPLETED SEEDING OPERATIONS PROVIDING A UNIFORMLY DENSE, LIVE, AND HEALTHY STAND OF GRASS, FREE OF WEEDS AND UNDESIRABLE GRASSES, DEBRIS, AND FREE OF ERODED AREAS, BARE SPOTS, DISEASES, AND INSECTS AT THE END OF ONE YEARS FOLLOWING THE MINIMUM MAINTENANCE PERIOD OR PROJECT ACCEPTANCE, WHICHEVER IS MORE RECENT.

B. CONTRACTOR TO REPLACE AS ORIGINALLY SPECIFIED AREAS THAT HAVE FAILED TO SURVIVE, AS OFTEN AS REQUIRED, TO ESTABLISH THE SEEDED LAWN AREA UNTIL ACCEPTED; AT NO ADDITIONAL COMPENSATION.

C. REPAIR AND REPLACE TO ORIGINAL CONDITION ALL DAMAGES TO PROPERTY RESULTANT FROM THE SEEDING OPERATION AND ALL DAMAGES AS A RESULT FROM THE REMEDYING OF THESE DEFECTS, WITHOUT ADDITIONAL COMPENSATION.

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

DRAWN BY: PLS JOB DATE: 2013
APPROVED: DLR JOB NUMBER: 86120379
CAD DATE: 5/21/2013 9:02:40 AM
CAD FILE: \\HRGMHNAS\Data\86120379\CAD\Parking_Lot\Dwgs\L\L.04.dwg

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	05/17/13	TMR	PER CITY COMMENTS

HRGreen
ILLINOIS DESIGN FIRM # 184.001322
420 N. FRONT STREET, SUITE 100
McHENRY, ILLINOIS 60050
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805
FAX: 815.385.1781 | HRGreen.com

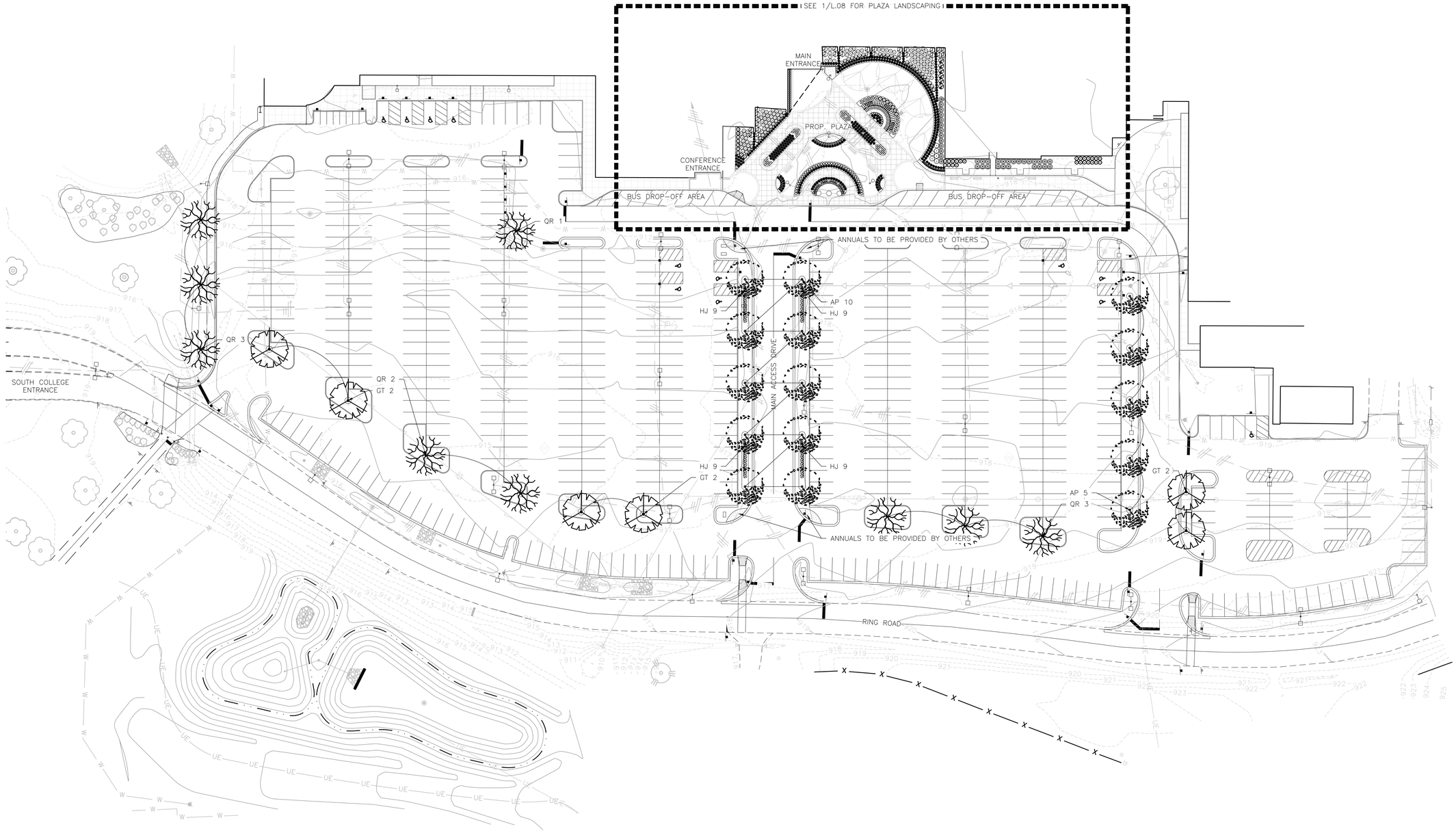
McHenry County College

McHENRY COUNTY COLLEGE
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

LANDSCAPE
PLANT LIST & GENERAL NOTES – P1

SHEET NO.
L.06

Xrefs: xyt-1-dh01; xl-dsgn; 86120379-XCS-Dsgn-Lot_B-D; 86120379-XV-survey; E1.01; irrigation



1 PLAN

SCALE: 1" = 40'-0"

NORTH

GROUNDCOVER LEGEND

ANNUALS

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

DRAWN BY:	PLS
APPROVED:	DLR
CAD DATE:	5/21/2013 9:04:30 AM
CAD FILE:	\\HRGMHNAS\Data\86120379\CAD\Parking_Lot\Dwgs\L\L.07.dwg
JOB DATE:	2013
JOB NUMBER:	86120379

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McHenry County College

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PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

LANDSCAPE

LANDSCAPE PLAN – P2 PARKING LOT

SHEET NO. L.07

Xrefs: xgt-1-dh01; xl-dsgn; 86120379-XCS-Dsgn-Lot_B-D; 86120379-XV-survey; E1.01; Irrigation

EXIST. BUILDING

SP 2
RA 6
CA 6
HR 11
ANNUALS TO BE PROVIDED BY OTHERS

EXIST. BUILDING

HP 22

RA 8
SP 4
CA 6
RR 7
SH 69

RR 6
RA 5
SP 4
CA 2
SP 4

RR 11
RA 34
CA 4

SP 6
VT 6
CA 19
VD 13

CANOPY

EXIST. DECORATIVE BROOM FINISH CONCRETE

HJ 5
EA 7

RR 11
CA 28
RA 23
SP 6

4" PVC CONDUIT (TYP.)

HJ 5

SP 2
RR 3
RA 16

EXIST. CONTAINER CURB

HR 18
CA 14
LS 16
ANNUALS TO BE PROVIDED BY OTHERS

SH 9
HR 11

HR 10
SH 12
CA 13
SH 12
HR 10

CA 12
SH 22
HR 18

PROP. TRELLIS (TYP.)
PROP. UTILITY (TYP.)
EXIST. UTILITY (TYP.)
EXIST. CONTAINER CURB

EA 9
CA 8
SH 5

4" PVC CONDUIT (TYP.)

CS 6
EA 10

VD 18
VD 6

EXIST. BUILDING

DEMO TURF FROM PHASE 1 TO INSTALL PROPOSED PHASE 2 LANDSCAPING

PHASE 1 LANDSCAPING (TYP.)

EA 14

CA 7
SN 8
ANNUALS TO BE PROVIDED BY OTHERS

EXIST. DECORATIVE BROOM FINISH CONCRETE

CA 7
SN 7
ANNUALS TO BE PROVIDED BY OTHERS

EXIST. DECORATIVE BROOM FINISH CONCRETE

CA 79
SN 13
ANNUALS TO BE PROVIDED BY OTHERS

EXIST. PCC SIDEWALK

EXIST. BENCH (TYP.)
PROP. TRASH RECEPTACLE (TYP.)

SH 17
HR 41
SH 35
PV 39
EXIST. FLAG POLE (TYP.)

EXIST. LIGHT POLE (TYP.)
EXIST. B.O.C. (TYP.)
EXIST. E.O.P. (TYP.)

BUS DROP-OFF AREA

SEE 1/L.07 FOR PARKING LOT LANDSCAPING

1 PLAN

SCALE: 1" = 10'-0"

NORTH

GROUNDCOVER LEGEND

ANNUALS

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

Xrefs: xgl-1-dh01; xl-dsgn; 86120379-XCS-Dsgn-Lot_B-D; 86120379-XV-survey; E1.01; Irrigation

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McHenry County College

McHENRY COUNTY COLLEGE
PARKING LOT RECONSTRUCTION
CRYSTAL LAKE, ILLINOIS

LANDSCAPE
LANDSCAPE PLAN – P2 PLAZA

SHEET NO.
L.08

MCHENRY COUNTY COLLEGE						
May 1, 2013						
MATERIALS SCHEDULE - PHASE 2						
QTY	KEY	BOTANICAL NAME/ITEM	COMMON NAME	SIZE	COND	REMARKS
DECIDUOUS TREES						
15	AP	ACER PLATANOIDES 'POND'	EMERALD LUSTRE NORWAY MAPLE	2.5" CAL.	B&B	CENTRAL LEADER
6	GT	GLEDITSIA TRIACANTHOS VAR. INERMIS 'SKYCOLE'	SKYLINE THORNLESS HONEYLOCUST	2.5" CAL.	B&B	CENTRAL LEADER
9	QR	QUERCUS RUBRA	RED OAK	2.5" CAL.	B&B	CENTRAL LEADER
DECIDUOUS SHRUBS						
6	CS	CORNUS SERICEA 'ISANTI'	REDTWIG DOGWOOD	24" HT.	CONT.	
40	EA	EUONYMUS ALATUS 'RUDY HAAG'	DWARD BURNING BUSH	24" HT.	CONT.	
46	HJ	HYDRANGEA PANICULATA 'JANE'	LITTLE LIME HYDRANGEA	24" HT.	CONT.	
92	RA	RHUS AROMATICA 'GRO-LOW'	FRAGRANT SUMAC	24" HT.	CONT.	
38	RR	ROSA 'RADRAZZ'	KNOCKOUT SHRUB ROSE	24" HT.	CONT.	
28	SP	SYRINGA PATULA 'MISS KIM'	DWARF LILAC	24" HT.	CONT.	
37	VD	VIBURNUM DENTATUM 'SYNNESVEDT'	CHICAGO LUSTRE ARROWWOOD VIBURNUM	36" HT.	CONT.	
6	VT	VIBURNUM TRILOBUM 'BAILEY COMPACT'	COMPACT CRANBERRYBUSH VIBURNUM	24" HT.	CONT.	
PERENNIALS & GRASSES						
205	CA	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	CONT.	SPACE 24" OC
22	HP	HOSTA 'PATRIOT'	HOSTA	1 GAL.	CONT.	SPACE 18" OC
119	HR	HEMEROCALLIS 'ROSY RETURNS'	DAYLILY	1 GAL.	CONT.	SPACE 18" OC
16	LS	LIATRIS SPICATA 'KOBOLD'	GAYFEATHER	1 GAL.	CONT.	SPACE 18" OC
39	PV	PANICUM VIRGATUM 'NORTHWIND'	NORTHWIND SWITCH GRASS	1 GAL.	CONT.	SPACE 24" OC
181	SH	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	1 GAL.	CONT.	SPACE 24" OC
28	SN	SALVIA NEMOROSA 'MAY NIGHT'	SALVIA	1 GAL.	CONT.	SPACE 18" OC
MISCELLANEOUS						
70	MULCH			CY		

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11. IF CONFLICTS ARISE BETWEEN THE SIZE OF AREAS AND PLANS, THE CONTRACTOR IS REQUIRED TO CONTACT THE OWNER'S REPRESENTATIVE FOR RESOLUTION PRIOR TO INSTALLATION.
12. WHERE PROVIDED, AREA TAKEOFFS AND PLANT QUANTITY ESTIMATES IN THE PLANT LIST ARE FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE TO DO THEIR OWN QUANTITY TAKE-OFFS FOR ALL PLANT MATERIALS AND SIZES SHOWN ON PLANS. IN CASE OF ANY DISCREPANCIES, PLANS TAKE PRECEDENCE OVER CALL-OUTS AND/OR THE PLANT LIST(S).
13. ALL PLANTS SHALL BE NURSERY GROWN PLANTS MEETING AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA) STANDARDS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1-2004). PLANTS ARE TO BE TYPICAL IN SHAPE AND SIZE FOR SPECIES. PLANTS SHALL NOT BE ROOT-BOUND OR LOOSE IN THEIR CONTAINERS. HANDLE ALL PLANTS WITH CARE IN TRANSPORTING, PLANTING AND MAINTENANCE UNTIL INSPECTION AND FINAL ACCEPTANCE. FIELD COLLECTED MATERIAL SHALL NOT BE USED UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
14. SHREDDED HARDWOOD MULCH, FERTILIZING, AS SPECIFIED, STAKING, WATERING AND ONE (1) YEAR PLANT WARRANTY FOR INSTALLED PLANT MATERIAL, SHALL BE CONSIDERED INCIDENTAL TO THE PLANT ITEMS.
15. MUSHROOM COMPOST SHALL BE FINELY SCREENED, HOMOGENOUS, DECOMPOSED ORGANIC MATERIAL SUITABLE FOR HORTICULTURAL USE AS AVAILABLE FROM MIDWEST TRADING HORTICULTURAL SUPPLIES, INC. ST. CHARLES, IL 60174 (630) 365-1990 OR APPROVED EQUAL. MIX THOROUGHLY IN PLANT BED BEFORE INSTALLING PLANTS.
16. WARRANTY: ONE (1) YEAR REPLACEMENT WARRANTY FOR ALL PLANT MATERIALS SHALL BE CONSIDERED INCIDENTAL TO THIS PROJECT. WARRANTY SHALL COVER PLANTS WHICH HAVE DIED OR PARTIALLY DIED (THEREBY RUINING THEIR NATURAL SHAPE), BUT SHALL NOT INCLUDE DAMAGE BY VANDALISM, BROWSING, HAIL, ABNORMAL FREEZES, DROUGHT OR NEGLIGENCE BY THE OWNER. THE WARRANTY IS INTENDED TO COVER CONTRACTOR NEGLIGENCE, INFESTATIONS, DISEASE AND DAMAGE OR SHOCK TO PLANTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND WATERING THE PLANT MATERIAL AS NECESSARY, TO ENSURE GROWTH AND ESTABLISHMENT DURING THE 1-YEAR WARRANTY PERIOD. ANY PLANTS THAT ARE NOT IN A LIVE, HEALTHY, GROWING CONDITION AT THE END OF THE 1-YEAR WARRANTY PERIOD SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. PLANTS REPLACED UNDER WARRANTY WILL BE WARRANTED FOR ONE (1) YEAR FOLLOWING REPLACEMENT.

GENERAL NOTES – SPECIAL REQUIREMENTS– WARRANTY AND MAINTENANCE OF SEEDED AREAS

1. MOWING, TRIMMING AND REMOVAL OF GRASS CLIPPINGS IN TURF AREAS, DURING INITIAL 60 DAYS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DURING THIS TIME, CONTRACTOR SHALL MOW TURF AREAS AT REGULAR INTERVALS TO MAINTAIN AT A MAXIMUM HEIGHT OF 2-1/2 INCHES. DO NOT CUT MORE THAN 1/3 OF GRASS BLADE AT ANY ONE MOWING. CONTRACTOR SHALL ALSO NEATLY TRIM EDGES WHERE NECESSARY AND REMOVE CLIPPINGS AFTER MOWING AND TRIMMING.
2. WARRANTY:
   A. WARRANTY OF SEEDED AREAS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM.
   B. THE WARRANTY IS TO GUARANTEE COMPLETED SEED AREAS FOR A PERIOD OF 1 YEAR AFTER INITIAL ACCEPTANCE HAS BEEN DOCUMENTED.
   C. REPLACEMENT COSTS ARE THE CONTRACTOR'S RESPONSIBILITY, EXCEPT FOR THOSE RESULTING FROM LOSS OR DAMAGE DUE TO VANDALISM, CIVIL DISOBEDIENCE, ACTS OF NEGLECT ON THE PART OF OTHERS, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, FIRE, OR LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITY, OR BY "ACTS OF GOD."
3. MAINTENANCE:
   A. CONTRACTOR SHALL COORDINATE MAINTENANCE OPERATIONS AND ACTIVITIES WITH THE OWNER DURING THE WARRANTY PERIOD.
   B. MAINTENANCE OF SEED AREAS SHALL BE PERFORMED BY TRAINED PERSONNEL SKILLED IN IDENTIFYING DESIRED AND UNDESIRED PLANT MATERIAL.
   C. CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF SEEDED AREAS DURING THE 1 YEAR WARRANTY PERIOD WITH THE EXCEPTION OF ROUTINE MOWING OF TURF AREAS. ROUTINE MOWING OF TURF AREAS, DURING THE 1 YEAR WARRANTY PERIOD, WILL BE THE RESPONSIBILITY OF THE OWNER ONCE INITIAL ACCEPTANCE HAS BEEN DOCUMENTED.
   D. MAINTENANCE OF SEEDED AREAS SHALL INCLUDE:
      - WATERING TO PREVENT GRASS AND SOIL FROM DRYING OUT.
      - ROLLING THE SURFACE TO REMOVE MINOR DEPRESSIONS OR IRREGULARITIES.
      - CONTROLLING GROWTH OF WEEDS. APPLY HERBICIDES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REMEDY DAMAGE RESULTING FROM IMPROPER USE OF HERBICIDES.
      - PROTECTING SEEDED AREAS WITH WARNING SIGNS DURING MAINTENANCE AND WARRANTY PERIOD AS DEEMED NECESSARY.
      - IN THE SPRING OF EACH YEAR DURING THE 1 YEAR WARRANTY PERIOD, THE CONTRACTOR SHALL CORRECT AND RESEED AS ORIGINALLY SPECIFIED, ANY DEFECTS IN THE SEEDED AREAS AND GRASS STAND, SUCH AS WEEDY AREAS, ERODED AREAS, AND BARE SPOTS, UNTIL AFFECTED AREAS ARE ACCEPTABLE TO THE OWNER'S REPRESENTATIVE.
      - IN THE SPRING DURING THE 1 YEAR WARRANTY PERIOD, THE CONTRACTOR SHALL REPLACE OR REPAIR TO ORIGINAL CONDITION, ALL DAMAGES TO PROPERTY RESULTING FROM THE SEEDING OPERATION OR FROM THE REMEDYING OF DEFECTS, AT THE CONTRACTOR'S EXPENSE.

SPECIAL REQUIREMENTS – WARRANTY

A. A WARRANTY IS REQUIRED TO GUARANTEE COMPLETED SEEDING OPERATIONS PROVIDING A UNIFORMLY DENSE, LIVE, AND HEALTHY STAND OF GRASS, FREE OF WEEDS AND UNDESIRABLE GRASSES, DEBRIS, AND FREE OF ERODED AREAS, BARE SPOTS, DISEASES, AND INSECTS AT THE END OF ONE YEARS FOLLOWING THE MINIMUM MAINTENANCE PERIOD OR PROJECT ACCEPTANCE, WHICHEVER IS MORE RECENT.

B. CONTRACTOR TO REPLACE AS ORIGINALLY SPECIFIED AREAS THAT HAVE FAILED TO SURVIVE, AS OFTEN AS REQUIRED, TO ESTABLISH THE SEEDED LAWN AREA UNTIL ACCEPTED; AT NO ADDITIONAL COMPENSATION.

C. REPAIR AND REPLACE TO ORIGINAL CONDITION ALL DAMAGES TO PROPERTY RESULTANT FROM THE SEEDING OPERATION AND ALL DAMAGES AS A RESULT FROM THE REMEDYING OF THESE DEFECTS, WITHOUT ADDITIONAL COMPENSATION.

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

Xrefs: xpl-1-dh01; xl-dsgn; 86120379-XCS-Dsgn-Lot_B-D; 86120379-XV-survey; E1.01; irrigation

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LANDSCAPE
PLANT LIST & GENERAL NOTES – P2

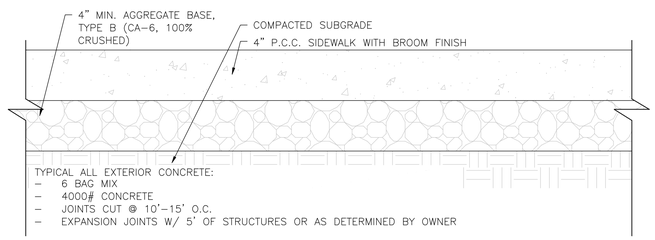
SHEET NO.
L.09

MCHENRY COUNTY COLLEGE					
May 1, 2013					
FURNISHINGS SCHEDULE - PHASE 1					
QTY	ITEM	MANUFACTURER & MODEL	MATERIAL & FINISH	CONTACT INFORMATION	REMARKS
8	BENCH	DUMOR, INC. 193-60 6' LONG STEEL BENCH WITHOUT BACKREST & 2 SUPPORTS	SLATS: BLACK POWDERCOAT FRAME: BLACK POWDERCOAT	MANUFACTURER: DUMOR, INC. (800) 598-4018 LOCAL REP: NUTOYS LEISURE PRODUCTS (708) 579-9055	SURFACE MOUNT SEE MANUFACTURER'S SPECIFICATIONS AND DETAILS FOR RECOMMENDATIONS
1	FLAG POLE	SPORTSPLAY EQUIPMENT, INC. 801-114 25' FLAGPOLE (DOES NOT INCLUDE FLAG)	STEEL WITH FLOCOAT GALVANIZED, TRIPLE COAT PROTECTION	MANUFACTURER: SPORTSPLAY EQUIPMENT, INC. (314) 389-4140 LOCAL REP: NUTOYS LEISURE PRODUCTS (708) 579-9055	SURFACE MOUNT SEE MANUFACTURER'S SPECIFICATIONS AND DETAILS FOR RECOMMENDATIONS
2	FLAG POLE	SPORTSPLAY EQUIPMENT, INC. 801-113 20' FLAGPOLE (DOES NOT INCLUDE FLAG)	STEEL WITH FLOCOAT GALVANIZED, TRIPLE COAT PROTECTION	MANUFACTURER: SPORTSPLAY EQUIPMENT, INC. (314) 389-4140 LOCAL REP: NUTOYS LEISURE PRODUCTS (708) 579-9055	SURFACE MOUNT SEE MANUFACTURER'S SPECIFICATIONS AND DETAILS FOR RECOMMENDATIONS
MCHENRY COUNTY COLLEGE					
May 1, 2013					
FURNISHINGS SCHEDULE - PHASE 2					
QTY	ITEM	MANUFACTURER & MODEL	MATERIAL & FINISH	CONTACT INFORMATION	REMARKS
1	TRELLIS	POLIGON GRE-30TE PRIMARY ROOF: TRELLIS COLUMNS: ROUND	FRAME: POLI 5000 BUMPER BLACK	MANUFACTURER: POLIGON (616) 399-1963 LOCAL REP: IMAGINE NATION (309) 447-6588	SURFACE MOUNT SEE MANUFACTURER'S SPECIFICATIONS AND DETAILS FOR RECOMMENDATIONS
3	TRASH RECEPTACLE	DUMOR, INC. 64-057 STEEL RECEPTACLE	FRAME: BLACK POWDERCOAT	MANUFACTURER: DUMOR, INC. (800) 598-4018 LOCAL REP: NUTOYS LEISURE PRODUCTS (708) 579-9055	SURFACE MOUNT SEE MANUFACTURER'S SPECIFICATIONS AND DETAILS FOR RECOMMENDATIONS
3	BENCH	DUMOR, INC. 192-60 6' LONG STEEL BENCH WITH BACKREST & 2 SUPPORTS	SLATS: BLACK POWDERCOAT FRAME: BLACK POWDERCOAT	MANUFACTURER: DUMOR, INC. (800) 598-4018 LOCAL REP: NUTOYS LEISURE PRODUCTS (708) 579-9055	SURFACE MOUNT SEE MANUFACTURER'S SPECIFICATIONS AND DETAILS FOR RECOMMENDATIONS

*PROVIDE LISTED MODELS OR APPROVED EQUALS

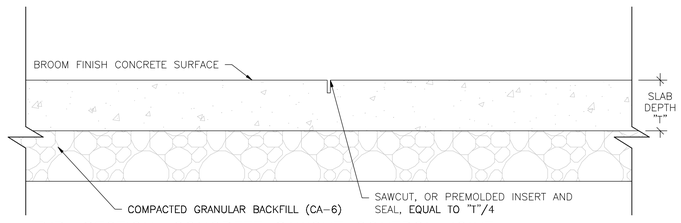
1 FURNISHINGS SCHEDULE

SCALE: N/A



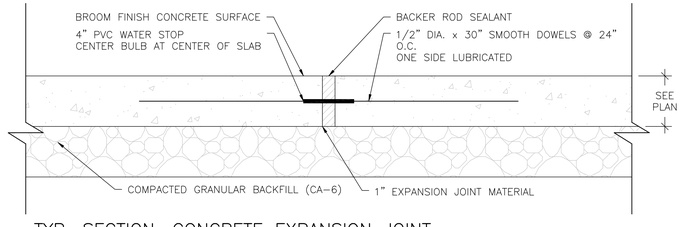
2 TYP. SECTION: CONCRETE SIDEWALK

SCALE: NTS



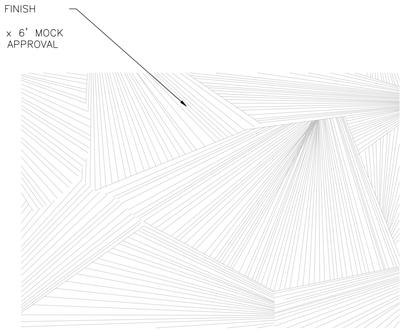
3 TYP. SECTION: CONCRETE SAWCUT CONTROL JOINT

SCALE: NTS



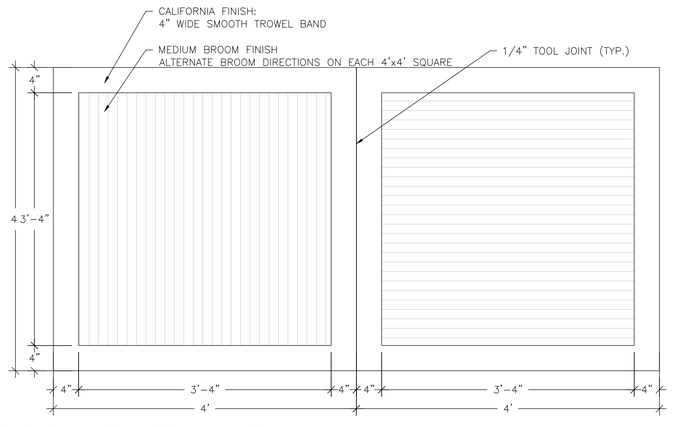
4 TYP. SECTION: CONCRETE EXPANSION JOINT

SCALE: NTS



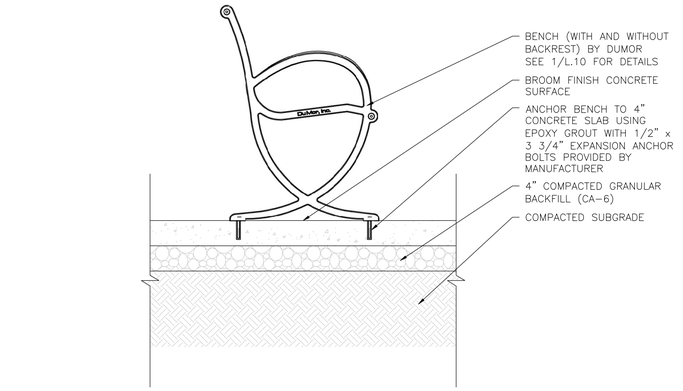
5 TYP. PLAN: DECORATIVE BROOM FINISH

SCALE: NTS



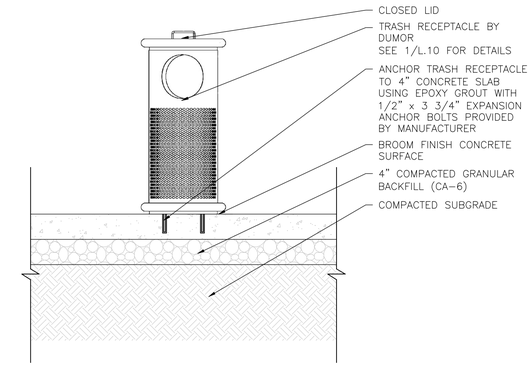
6 TYP. PLAN: CALIFORNIA FINISH

SCALE: NTS



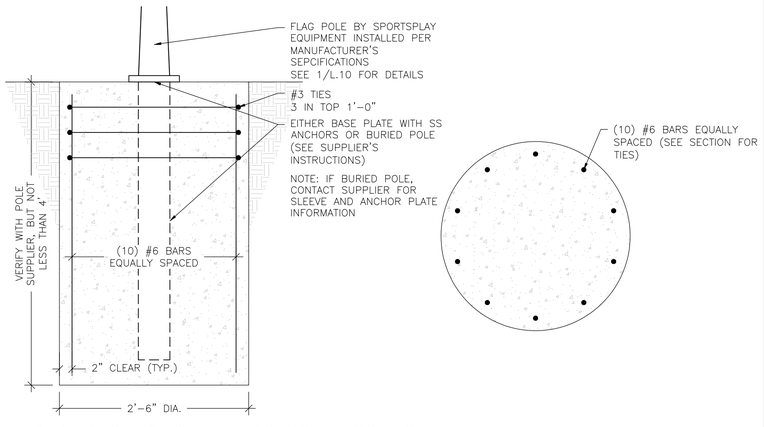
7 TYP. SECTION: BENCH

SCALE: NTS



8 TYP. SECTION: TRASH RECEPTACLE

SCALE: NTS



9 TYP. SECTION & PLAN: FLAG POLE FOOTING

SCALE: NTS

Xrefs: xg1-1-dh01; xl-details

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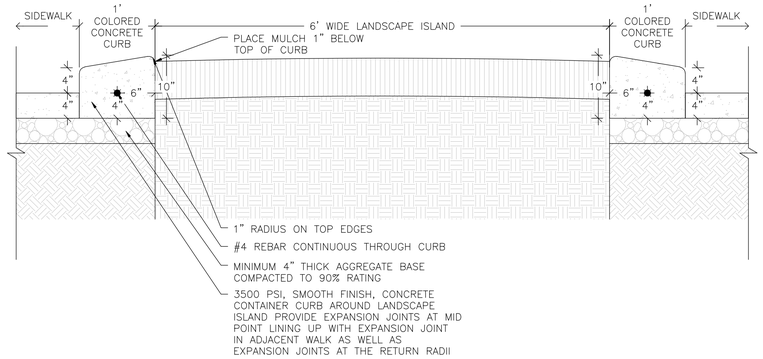
DETAILS

SHEET NO.
L.10

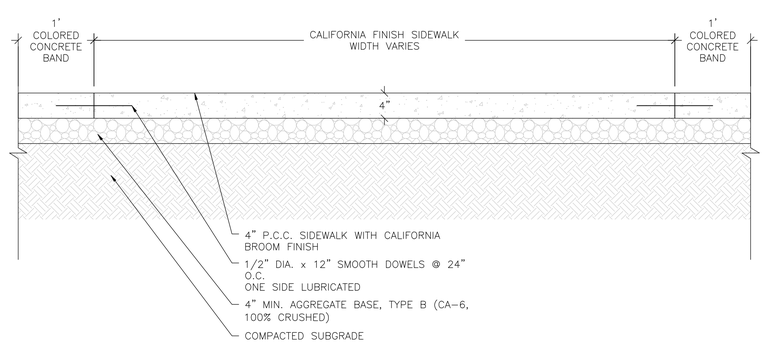
NOTE:
ALL COLORED CONCRETE CURBING TO BE CUSTOM, "MCC DARK BROWN", INTEGRAL COLOR PROVIDED BY BUTTERFIELD COLOR ROLLED USING LIGHT SLATE ROLLER ON CURB TOP (CURB SIDES TO BE SMOOTH)



1 TYP. SECTION: LANDSCAPE ISLAND CONTAINER CURB

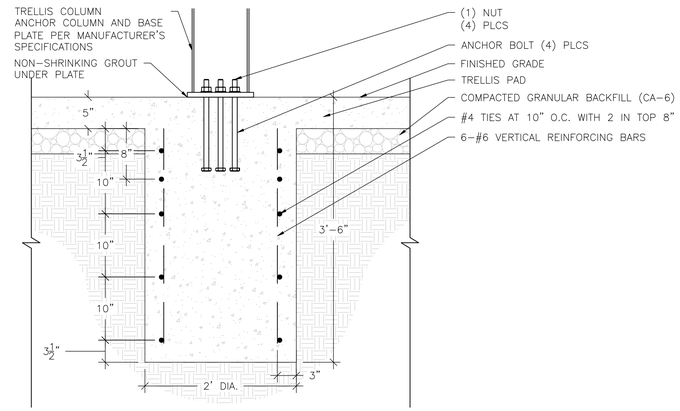
SCALE: NTS

NOTE:
ALL COLORED CONCRETE BANDING TO BE CUSTOM, "MCC DARK BROWN", INTEGRAL COLOR PROVIDED BY BUTTERFIELD COLOR ROLLED USING LIGHT SLATE ROLLER ON BANDING



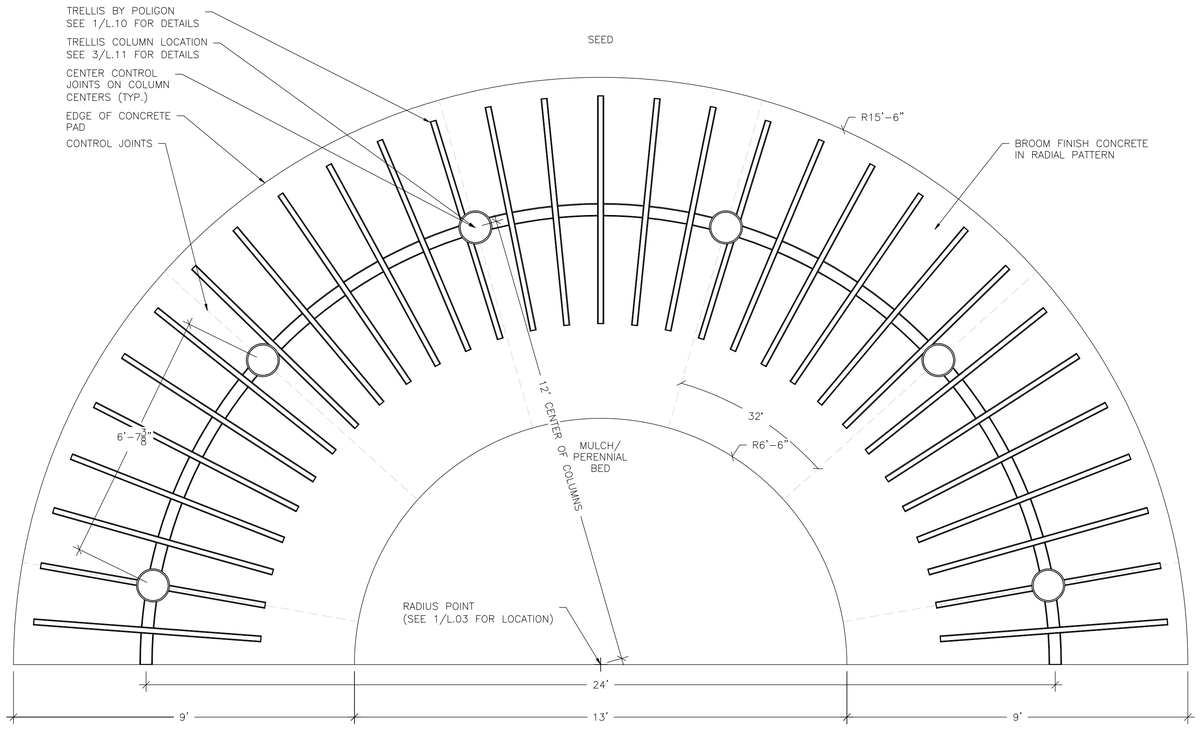
2 TYP. SECTION: COLOR CONCRETE BANDING

SCALE: NTS



3 TYP. SECTION: TRELLIS POST FOOTING & ANCHORING

SCALE: NTS



4 TYP. PLAN: TRELLIS & PAD DETAIL

SCALE: NTS

Xrefs: xg-1-dn01; xi-details

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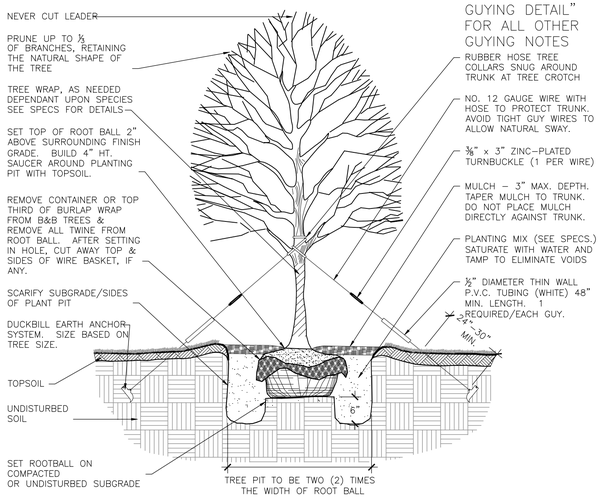
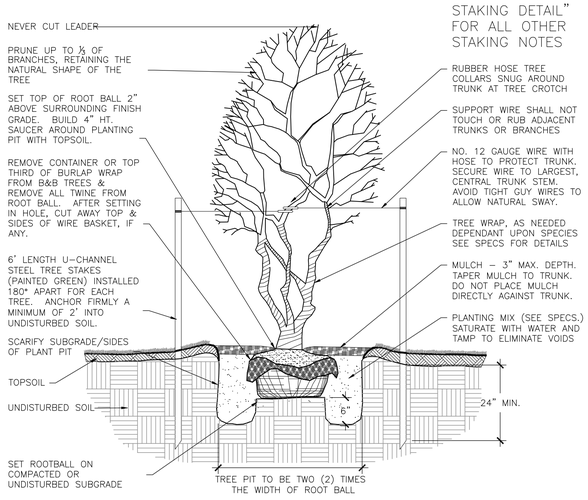


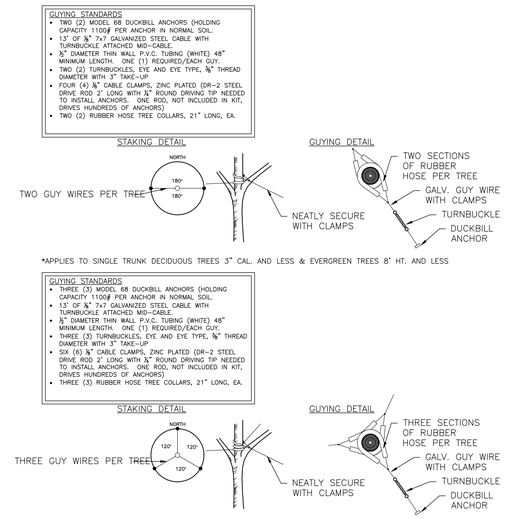
1 TYP. DECIDUOUS TREE PLANTING DETAIL

SCALE: NTS



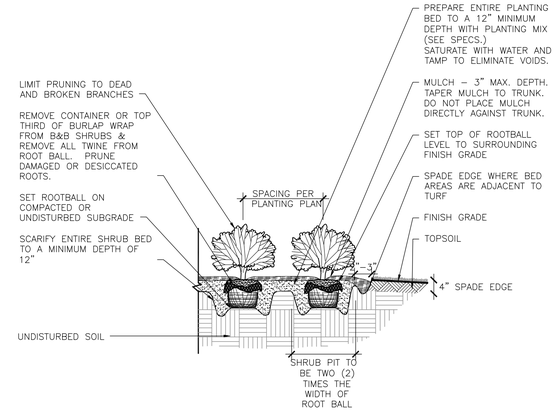
2 TYP. ORNAMENTAL TREE PLANTING DETAIL

SCALE: NTS



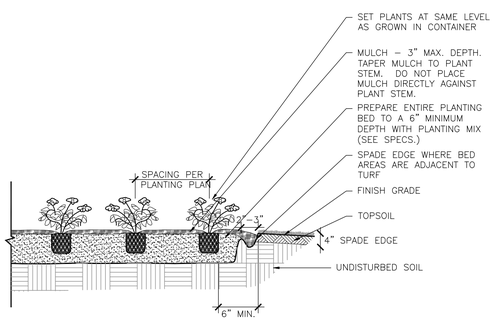
3 TYP. GUYING DETAIL

SCALE: NTS



4 TYP. SHRUB PLANTING DETAIL

SCALE: NTS



5 TYP. PERENNIAL PLANTING DETAIL

SCALE: NTS

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SHEET NO.
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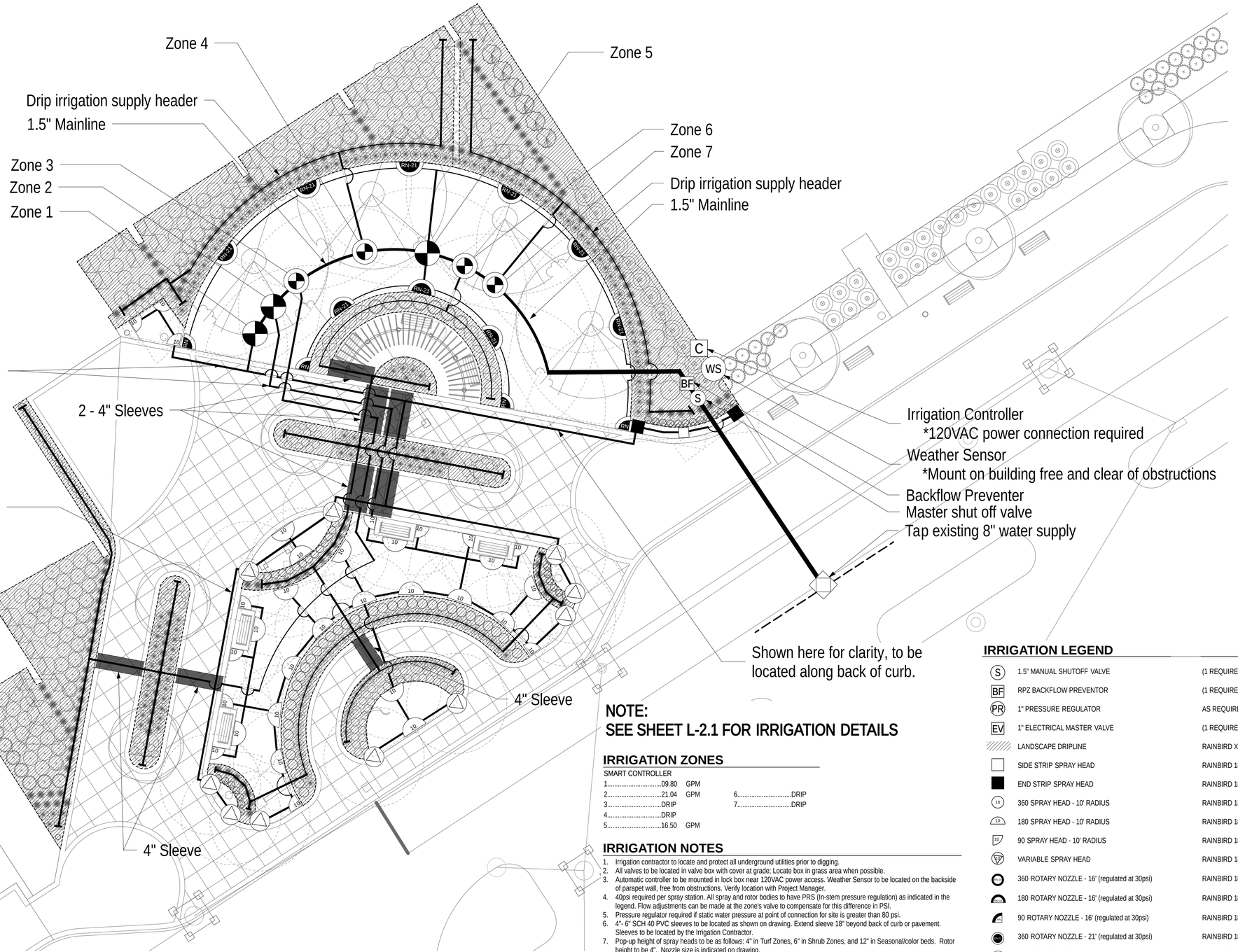
Xrefs: xg-1-dh01; xl-details



NOTE:
SEE SHEET L-2.1 FOR IRRIGATION DETAILS

IRRIGATION ZONES

SMART CONTROLLER

1	09.80 GPM	6	DRIP
2	21.04 GPM	7	DRIP
3	DRIP		
4	DRIP		
5	16.50 GPM		

IRRIGATION NOTES

1. Irrigation contractor to locate and protect all underground utilities prior to digging.
2. All valves to be located in valve box with cover at grade; Locate box in grass area when possible.
3. Automatic controller to be mounted in lock box near 120VAC power access. Weather Sensor to be located on the backside of parapet wall, free from obstructions. Verify location with Project Manager.
4. 40psi required per spray station. All spray and rotor bodies to have PRS (In-stem pressure regulation) as indicated in the legend. Flow adjustments can be made at the zone's valve to compensate for this difference in PSI.
5. Pressure regulator required if static water pressure at point of connection for site is greater than 80 psi.
6. 4"- 6" SCH 40 PVC sleeves to be located as shown on drawing. Extend sleeve 18" beyond back of curb or pavement. Sleeves to be located by the Irrigation Contractor.
7. Pop-up height of spray heads to be as follows: 4" in Turf Zones, 6" in Shrub Zones, and 12" in Seasonal/color beds. Rotor height to be 4". Nozzle size is indicated on drawing.
8. All pipes, automatic valves, backflow preventor, manual valve and meter to be located within property lines; shown outside on drawing for clarity only.
9. Backflow preventer to be as per local code.
10. All mainlines to have a minimum of 18" cover (class 200 PVC pipe).
11. All lateral and sub-main pipe to have a minimum of 12" cover (class 200 PVC pipe).
12. No rocks, boulders, or other extraneous materials to be used in backfilling trenches.
13. All pipe, valves, drip, spray heads, rotors, controllers, and weather sensors to be installed as per manufacturers specifications.
14. All threaded joints to be coated with Teflon Tape or Liquid Teflon.
15. All lines to be thoroughly flushed before installation of sprinkler heads.
16. Must use products specified on this drawing, unless otherwise approved by Manley Land Design - 770.442.8171.
17. Contractor to field verify that installed irrigation system provides 100% coverage upon completion of installation. If system does not provide 100% coverage, the Contractor shall contact the Landscape Architect and than revise system to provide 100% coverage.

IRRIGATION LEGEND

S	1.5" MANUAL SHUTOFF VALVE	(1 REQUIRED)
BF	RPZ BACKFLOW PREVENTOR	(1 REQUIRED)
PR	1" PRESSURE REGULATOR	AS REQUIRED
EV	1" ELECTRICAL MASTER VALVE	(1 REQUIRED)
	LANDSCAPE DRIPLINE	RAINBIRD XFD-06-18
	SIDE STRIP SPRAY HEAD	RAINBIRD 1800-PRS-15SST
	END STRIP SPRAY HEAD	RAINBIRD 1800-PRS-15EST
10	360 SPRAY HEAD - 10' RADIUS	RAINBIRD 1800-PRS-U10F
10	180 SPRAY HEAD - 10' RADIUS	RAINBIRD 1800-PRS-U10H
10	90 SPRAY HEAD - 10' RADIUS	RAINBIRD 1800-PRS-U10Q
	VARIABLE SPRAY HEAD	RAINBIRD 1800-PRS-10-VAN
	360 ROTARY NOZZLE - 16' (regulated at 30psi)	RAINBIRD 1800-PRS-R13-18F
	180 ROTARY NOZZLE - 16' (regulated at 30psi)	RAINBIRD 1800-PRS-R13-18H
	90 ROTARY NOZZLE - 16' (regulated at 30psi)	RAINBIRD 1800-PRS-R13-18Q
	360 ROTARY NOZZLE - 21' (regulated at 30psi)	RAINBIRD 1800-PRS-R17-24F
	180 ROTARY NOZZLE - 21' (regulated at 30psi)	RAINBIRD 1800-PRS-R17-24H
	90 ROTARY NOZZLE - 21' (regulated at 30psi)	RAINBIRD 1800-PRS-R17-24Q
	1" ELECTRIC VALVE	RAINBIRD 100-PGA
	1" DRIP CONTROL ZONE VALVE	RAINBIRD XCZ-100-B-COM
C	AUTOMATIC CONTROLLER	RAINBIRD ESP-SMT (outdoor model)
WS	WEATHER SENSOR	INCLUDED W/T CONTROLLER
	CLASS 200 PVC IRRIGATION PIPE AND FITTINGS	1" pipe unless otherwise indicated on drawing; 1.5" mainline
	4" - 6" CLASS 200 PVC SLEEVE UNDER PAVEMENT	installation of sleeves by contractor in location as shown on plan; size as indicated

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51 old canton street
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McHenry County College

McHenry County College
Crystal Lake, IL

date:	5.2.13
scale:	1"-10'-0"
drawn by:	ADN
checked by:	SLM
job number:	2013029

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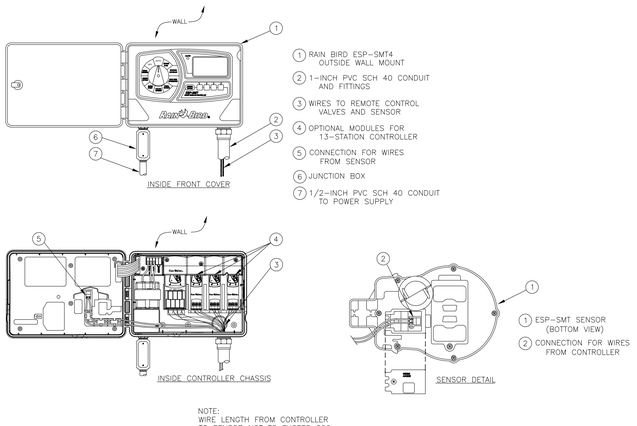
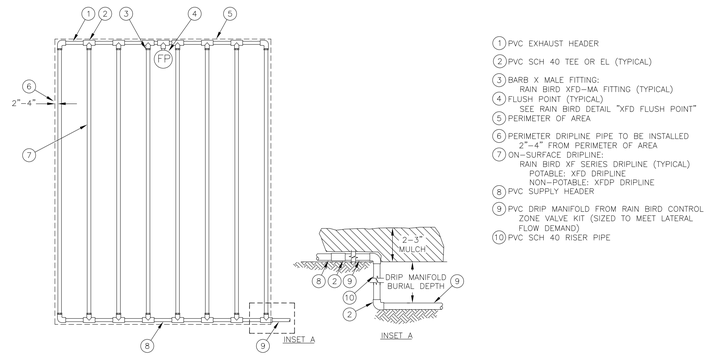
Irrigation Plan

sheet number

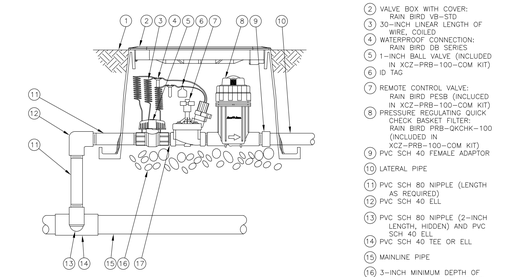
L-2.0



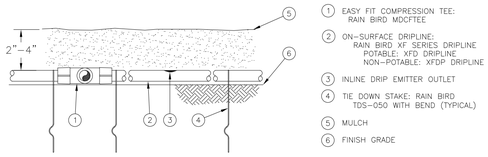
1 WEATHER BASED SMART CONTROLLER
SCALE: NTS



2 LANDSCAPE DRIPLINE ENDFEED LAYOUT
SCALE: NTS

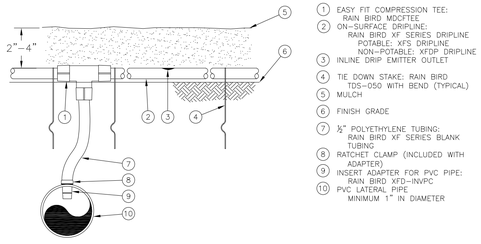


3 DRIP VALVE: XCZ-PRB-100-B-COM
SCALE: NTS



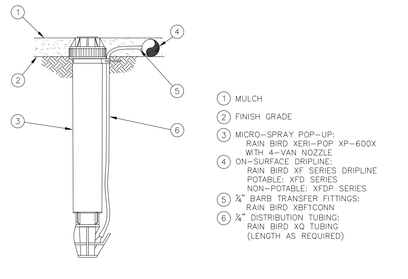
NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

4 LANDSCAPE DRIPLINE ON GRADE
SCALE: NTS



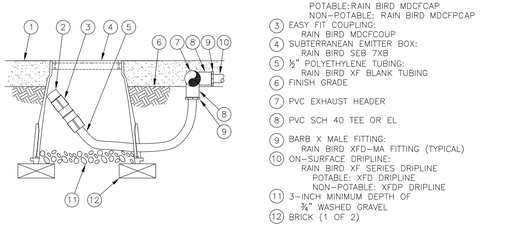
NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

5 ON-SURFACE DRIPLINE INSERT ADAPTER
SCALE: NTS



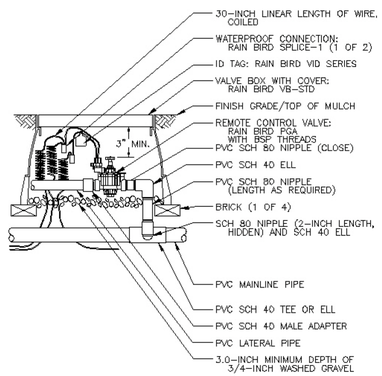
NOTE:
1. USE XERIMAN TOOL XM-TOOL TO INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.
2. VAN NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE, SET THE ARC TO ¾ PATTERN. THE FLOW FROM THE NOZZLE, 0.3 GPM, SHOULD BE ACCOUNTED FOR IN THE SYSTEM DESIGN.

6 ON-SURFACE DRIPLINE OPERATION INDICATOR
SCALE: NTS

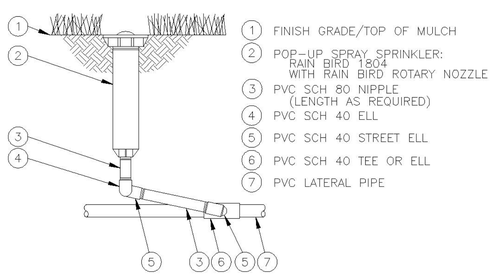


NOTE:
1. ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

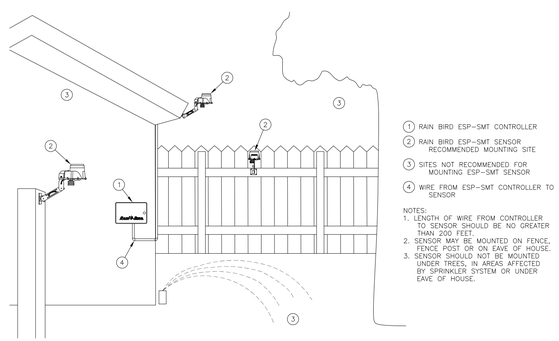
7 XFD DRIPLINE FLUSH POINT
SCALE: NTS



9 SPRAY/ROTOR VALVE: 100-PGA-PRS-D
SCALE: NTS

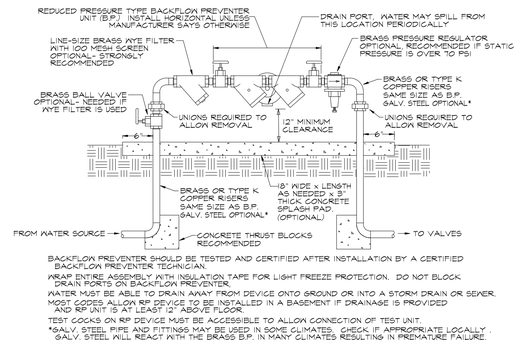


9 1804 SPRAY BODY
SCALE: NTS



NOTES:
1. LENGTH OF WIRE FROM CONTROLLER TO SENSOR SHOULD BE NO GREATER THAN 200 FEET.
2. SENSOR MAY BE MOUNTED ON FENCE, FENCE POST OR ON EAVE OF HOUSE.
3. SENSOR SHOULD NOT BE MOUNTED UNDER TREES, IN AREAS AFFECTED BY SPRINKLER SYSTEM OR UNDER EAVE OF HOUSE.

10 WEATHER SENSOR
SCALE: NTS



BACKFLOW PREVENTER SHOULD BE TESTED AND CERTIFIED AFTER INSTALLATION BY A CERTIFIED BACKFLOW PREVENTER TECHNICIAN.
WRAP ENTIRE ASSEMBLY WITH INSULATION TAPE FOR LIGHT FREEZE PROTECTION. DO NOT BLOCK DRAIN PORTS ON BACKFLOW PREVENTER.
WATER MUST BE ABLE TO DRAIN AWAY FROM DEVICE ONTO GROUND OR INTO A STORM DRAIN OR SEWER.
MOST CODES ALLOW RP DEVICE TO BE INSTALLED IN A BASEMENT IF DRAINAGE IS PROVIDED AND RP UNIT IS AT LEAST 12" ABOVE FLOOR.
TEST COCKS ON RP DEVICE MUST BE ACCESSIBLE TO ALLOW CONNECTION OF TEST UNIT.
*GALV. STEEL PIPE AND FITTINGS MAY BE USED IN SOME CLIMATES. CHECK IF APPROPRIATE LOCALLY. GALV. STEEL WILL REACT WITH THE BRASS B.P. IN MANY CLIMATES RESULTING IN PREMATURE FAILURE.

11 RP BACKFLOR PREVENTER
SCALE: NTS

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McHenry County College

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Irrigation Details

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LUMINAIRE SCHEDULE

MOUNTING: (MTG)
- RE- RECESSED
- SP- SUSPENDED
- CL- CEILING SURFACE
- WL- WALL
- UC- UNDER CABINET
- CV- COVE
- PL- POLE
- O- OTHER (SEE DESCRIPTION)

DOOR:
- FA- FLAT ALUMINUM
- FS- FLAT STEEL
- RA- REGRESSED ALUMINUM
- RS- REGRESSED STEEL

FINISH:
- PAF- PAINT AFTER FABRICATION
- CSA- FINISH SELECTION BY ARCHITECT

LAMP TYPE:
- FL- FLUORESCENT
- CF- COMPACT FLUORESCENT
- IN- INCANDESCENT
- LED- LIGHT EMITTING DIODE
- HS- HIGH PRESSURE SODIUM
- MH- METAL HALIDE
- MV- MERCURY VAPOR
- LV- LOW VOLTAGE
- SMH- SUPER METAL HALIDE
- PSMH- PULSE START METAL HALIDE
- O- OTHER (SEE DESCRIPTION)
- XL- EXTENDED LIFE 24,000 HR
- XLP- EXTENDED LIFE & OUTPUT 24,000 HOURS 3100 LUMENS

LENS/LOUVER: (L/L)
- A- .125" ACRYLIC
- B- BLACK BAFFLE
- C- CLEAR ALZAK
- D- PARABOLIC
- F- FRESNEL
- G- TEMPERED GLASS
- H- WALL WASHER
- P- POLYCARBONATE
- K- KSH12 .125" ACRYLIC
- K19- KSH19 .156" ACRYLIC
- L- LOW IRIDESCENT SPECULAR ALUM.
- N- NONE
- R- HIGH IMPACT DR ACRYLIC
- O- OTHER (SEE DESCRIPTION)

BALLAST: (BLS)
- DIM- DIMMING BALLAST
- EB- ELECTRONIC BALLAST
- EM- EMERGENCY BATTERY/BALLAST
- DALI- DIGITAL DIMMING BALLAST
- ##BF- BALLAST FACTOR
- HL- HIGH / LOW LEVEL BALLAST
- HP- HIGH PERFORMANCE
- ML- MULTI-LEVEL SWITCHING
- MV- MULTI-VOLTAGE ELECTRONIC

CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE FIRST MANUFACTURER LISTED IS THE BASIS FOR DESIGN.

ALL LAMPS FOR THIS PROJECT SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
LAMP CORRELATED COLOR TEMPERATURE 4000°K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 70, UNLESS NOTED OTHERWISE.

ITEM	DESCRIPTION	SIZE	MTG	LAMPS TYPE	LAMPS QUANTITY & SIZE	VOLTS / BLS	L/L	APPROVED MANUFACTURER
S1	SITE LIGHTING LUMINAIRE, SINGLE HEAD, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 4 DISTRIBUTION, LED DRIVER, 10kV TRANSIENT LINE SURGE PROTECTOR. COORDINATE WITH CIVIL ENGINEER FOR FINISH SELECTION. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER	15 1/2" W 28 3/4" L 4" H	PL	LED	1 206 WATT	277V	O	BASE BID: MCGRAW-EDISON GLEON-AA-04-E1-T4 ALTERNATE BID #1: BETA LIGHTING ARE-EDG-4M-DA-20-D-UL LITHONIA DSX2 LED
S2	SITE LIGHTING LUMINAIRE, DUAL HEADS, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 4 DISTRIBUTION, LED DRIVER, 10kV TRANSIENT LINE SURGE PROTECTOR. COORDINATE WITH CIVIL ENGINEER FOR FINISH SELECTION. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER	15 1/2" W 28 3/4" L 4" H	PL	LED	2 206 WATT	277V	O	BASE BID: MCGRAW-EDISON GLEON-AA-04-E1-T4 ALTERNATE BID #1:BETA LIGHTING ARE-EDG-4M-DA-20-D-UL LITHONIA DSX2 LED
S3	SITE LIGHTING LUMINAIRE, SINGLE HEAD, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 2 DISTRIBUTION, LED DRIVER, 10kV TRANSIENT LINE SURGE PROTECTOR. COORDINATE WITH CIVIL ENGINEER FOR FINISH SELECTION. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER, BREAKAWAY TRANSFORMER BASE.	15 1/2" W 28 3/4" L 4" H	PL	LED	1 103 WATT	277V	O	BASE BID: MCGRAW-EDISON GLEON-AA-02-E1-T2 ALTERNATE BID #1: BETA LIGHTING ARE-EDG-2M-DA-10-D-UL LITHONIA DSX1 LED
S4	SITE LIGHTING LUMINAIRE, DUAL HEADS, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS, TYPE 2 DISTRIBUTION, LED DRIVER, 10kV TRANSIENT LINE SURGE PROTECTOR. COORDINATE WITH CIVIL ENGINEER FOR FINISH SELECTION. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER, BREAKAWAY TRANSFORMER BASE	15 1/2" W 28 3/4" L 4" H	PL	LED	2 103 WATT	277V	O	BASE BID: MCGRAW-EDISON GLEON-AA-02-E1-T2 ALTERNATE BID #1: BETA LIGHTING ARE-EDG-2M-DA-10-D-UL LITHONIA DSX1 LED
S5	PEDESTRIAN SITE LIGHTING LUMINAIRE, SINGLE HEAD, ALUMINUM BELL-SHAPED HOUSING, ACRYLIC REFRACTOR TYPE OPTICS, CLEAR FLAT GLASS LENS, TYPE 3 DISTRIBUTION, 10kV TRANSIENT LINE SURGE PROTECTOR. COORDINATE WITH CIVIL ENGINEER FOR FINISH SELECTION. POLE: 15' HEIGHT, WITH DECORATIVE BASE.	21" D 17.125" H	PL	LED	1 66 WATT	277V	O	STERNBERG 1521RLED/FG/480H/5816P5/4ARC45T3/ML/NR/STD
S6	SITE LIGHTING LUMINAIRE, DUAL HEADS, DIE-CAST ALUMINUM HOUSING, INJECTION MOLDED ACRYLIC OPTICS,1 HEAD WITH TYPE 4 DISTRIBUTION AND 1 HEAD WITH TYPE 2 DISTRIBUTION, LED DRIVER, 10kV TRANSIENT LINE SURGE PROTECTOR. COORDINATE WITH CIVIL ENGINEER FOR FINISH SELECTION. POLE: 30' HEIGHT, 6" SQUARE STRAIGHT ALUMINUM WITH INTERNAL VIBRATION DAMPER, BREAKAWAY TRANSFORMER BASE	15 1/2" W 28 3/4" L 4" H	PL	LED	2 206 WATT 103 WATT	277V	O	BASE BID: MCGRAW-EDISON GLEON-AA-04-E1-T4 GLEON-AA-02-E1-T2 ALTERNATE BID #1: BETA LIGHTING ARE-EDG-4M-DA-20-D-UL ARE-EDG-2M-DA-10-D-UL LITHONIA DSX2 LED DSX1 LED
S7	FLAG POLE ACCENT LUMINAIRE, DIE-CAST ALUMINUM HOUSING AND DOOR, TIGHT SPOT DISTRIBUTION, INJECTION MOLDED THERMOPLASTIC LENS, HEAVY-DUTY DIE-CAST ALUMINUM MOUNTING KNUCKLE. COORDINATE WITH CIVIL ENGINEER FOR FINISH SELECTION. LUMINAIRE MOUNTED ABOVE GRADE.	7 1/2" W 14" L 10"H	O	LED	1 24 WATT	277V	O	INVUE VFS-K-A20-3-LED-E1-TS BETA LIGHTING LITHONIA

ELECTRICAL DEMOLITION NOTES:

1. THE ELECTRICAL DRAWINGS INDICATE EXISTING ELECTRICAL ITEMS TO BE REMOVED. THE DRAWINGS ARE INTENDED TO INDICATE THE GENERAL SCOPE OF WORK REQUIRED AND DO NOT INDICATE EVERY BOX, CONDUIT, OR WIRE THAT MUST BE REMOVED. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID AND VERIFY EXISTING CONDITIONS.
2. ELECTRICAL ITEMS (i.e., LIGHTING FIXTURES, ETC.) REMOVED AND NOT RELOCATED REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN (i.e., FOR MAINTENANCE PURPOSES).
3. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER BEFORE TURNING OFF POWER TO CIRCUITS, FEEDERS, PANELS, ETC. COORDINATE ALL OUTAGES WITH OWNER.
4. WHERE LIGHTS ETC. ARE BEING REMOVED ALL ASSOCIATED WIRE BACK TO THE PANELBOARD OF FEEDER JUNCTION BOX SERVING THE DEVICE SHALL ALSO BE REMOVED.
5. THIS CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH OTHER CONTRACTORS AT THE JOB SITE BEFORE REMOVING EXISTING ELECTRICAL AND INSTALLING NEW ITEMS.
6. EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATED EXISTING CONDUIT SHALL NOT BE ALLOWED. BONDING CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO ASSURE PROPER GROUND PATH.
7. EQUIPMENT REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND CONDUIT AND WIRING AS REQUIRED TO MAINTAIN POWER TO REMAINING EQUIPMENT.
8. BALLASTS MANUFACTURED PRIOR TO 1980 CONTAIN PCBs AND SHALL BE DISPOSED OF BY A FEDERAL OR STATE E.P.A. APPROVED METHOD AND IN ACCORDANCE WITH SPECIFICATIONS.
9. HID AND FLUORESCENT LAMPS CONTAIN MERCURY AND SHALL BE DISPOSED OF BY A FEDERAL OR STATE E.P.A. APPROVED METHOD AND IN ACCORDANCE WITH SPECIFICATIONS.

ELECTRICAL DEMOLITION SYMBOL LIST

SYMBOL:	DESCRIPTION:
———	INDICATES EXISTING TO REMAIN
- - - - - -	INDICATES EXISTING TO BE REMOVED.
	POLE MOUNTED LUMINAIRE – (1) HEAD
	POLE MOUNTED LUMINAIRE – (2) HEAD
EP	EMERGENCY PHONE
	FLAGPOLE LUMINAIRE

GENERAL ELECTRICAL NOTES:

1. "#/E#.##" INDICATES DETAIL NUMBER/SHEET NUMBER.
2. ##-### INDICATES ELECTRICAL EQUIPMENT DEFINED IN ELECTRICAL SCHEDULES. REFER TO DRAWINGS CONTAINING ELECTRICAL SCHEDULES. PERMANENT NAMEPLATE SHALL MATCH FINAL EQUIPMENT NOMENCLATURE, NOT ELECTRICAL EQUIPMENT TAG NAME, REFER TO SPECIFICATIONS.
3. INDICATES KEYED NOTE USED TO DESCRIBE ADDITIONAL INFORMATION OF WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL IT IS SHOWN WITH.
4. SHADED LUMINAIRE OR DEVICE INDICATES LUMINAIRE OR DEVICE IS CONNECTED TO AN EMERGENCY CIRCUIT.
5. ALL ELECTRICAL CONDUCTORS SHALL BE COPPER.
6. INDICATES NUMBER OF WIRES IN CONDUIT.
   - GROUND WIRE
   - NEUTRAL WIRE
   - PHASE WIRE
7. ABBREVIATION KEY:
   - E.C. ELECTRICAL CONTRACTOR
   - G.C. GENERAL CONTRACTOR
   - C CONDUIT
   - TYP TYPICAL
8. LINE TYPE KEY:
   - ——— NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
   - – – – – – – NEW WORK UNDERFLOOR OR UNDERGROUND BY THIS CONTRACTOR (DARK LONG DASHED LINE)
   - ——— NEW WORK BY OTHERS AND/OR EXISTING TO REMAIN (LIGHT SOLID LINE)
   - - - - - - - - - - - - EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK SHORT DASHED LINE)

ELECTRICAL INSTALLATION NOTES:

1. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
3. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS, SEE SECTION 26 05 03.

GENERAL ELECTRICAL EQUIPMENT SCHEDULE

THE SYMBOLS AND THE EQUIPMENT SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF QUANTITIES AND SHALL FURNISH ALL MATERIAL REQUIRED, WHETHER SPECIFIED OR NOT, TO PRODUCE A SATISFACTORY WORKING SYSTEM.

CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE BUT ARE GIVEN ONLY TO AID THE CONTRACTOR IN THE SEARCH FOR MATERIAL. NO MATERIAL SHALL BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. EACH CONTRACTOR SHALL FIRST READ THE COMPLETE DESCRIPTION OF THE MATERIAL ON THESE DRAWINGS AND SPECIFICATIONS. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN. "STANDARD COLOR" INDICATES FACTORY FINISH AVAILABLE AT NO ADDITIONAL CHARGE.

ITEM NO.	SYMBOL	DESCRIPTION	APPROVED MANUFACTURERS
1	TC-1 TC-2	TIME SWITCH, 7 DAY, 2 CHANNEL, ELECTRONIC, TWO SPDT 15 AMP CONTACTS, TWO SEPARATE PROGRAMS WITH 16 SET POINTS AVAILABLE, L.C.D. DISPLAY, 12 OR 24 HOUR FORMAT, MINIMUM 100 HOURS CARRY-OVER, U.L. LISTED.	PARAGON EC72 TORK DTS 200A INTERMATIC ET70215C
2	LC-B LC-D LC-ROAD LC-NL	LIGHTING CONTACTOR, ELECTRICALLY HELD, 120 VOLT COIL, 300 VOLT 30 AMP CONTINUOUS CONTACTS, 4 POLE, N.E.M.A. 1 ENCLOSURE.	SQUARE D CLASS 8903 SIEMENS LEN SERIES CUTLER HAMMER CN35DG
3	HH-1	HANDHOLE, COMPOSITE POLYMER CONCRETE BODY AND COVER. STAINLESS STEEL LB. 20,000 HARDWARE. BOLTED NON-SKID COVER RATED FOR DESIGN LOAD OCCASIONAL NON-DELIBERATE VEHICULAR TRAFFIC. STACK UNITS TO ACHIEVE DEPTH SHOWN ON PLANS. UNITS IN LANDSCAPED AREAS SHALL BE GREEN IN COLOR. 11"W, 18"L, 18"D OR DIMENSIONS AS SHOWN ON PLANS	HUBBELL/QUAZITE PG SERIES CARSON INDUSTRIES H SERIES ARMORCAST HIGHLINE PRODUCTS SYNERTECH
4	HH-2	HANDHOLE, COMPOSITE POLYMER CONCRETE BODY AND COVER. STAINLESS STEEL LB. 20,000 HARDWARE. BOLTED NON-SKID COVER RATED FOR DESIGN LOAD OCCASIONAL NON-DELIBERATE VEHICULAR TRAFFIC. STACK UNITS TO ACHIEVE DEPTH SHOWN ON PLANS. UNITS IN LANDSCAPED AREAS SHALL BE GREEN IN COLOR. 11"W, 18"L, 18"D OR DIMENSIONS AS SHOWN ON PLANS "TECHNOLOGY"	HUBBELL/QUAZITE PG SERIES CARSON INDUSTRIES H SERIES ARMORCAST HIGHLINE PRODUCTS SYNERTECH

EXISTING PANEL NAME: **HA** — CONNECTED 7.6 KVA

TYPE: BOLT-ON | MAIN BUS METERING | MAIN:
MOUNTING: SURFACE | SOLID NEUTRAL | VOLTS: 480Y / 277
FED FROM: | GROUND BUS | PHASE: 3
K SCCR: 14,000 | WIRE: 4 K
E NOTES: E

Y * CKT NO.	LOAD DESCRIPTION	WIRE SIZE	LOAD KVA	BREAKER AMP	P	BREAKER AMP	P	LOAD KVA	WIRE SIZE	LOAD DESCRIPTION	CKT NO. Y *
1	EXISTING LOAD			20	1	20	1			EXISTING LOAD	2
3	EXISTING LOAD			20	1	20	1			EXISTING LOAD	4
5	EXISTING LOAD			20	1	20	1			EXISTING LOAD	6
7	EXISTING LOAD			20	1	20	1			EXISTING LOAD	8
9	EXISTING LOAD			20	1	20	1			EXISTING LOAD	10
11	EXISTING LOAD			20	1	20	1			EXISTING LOAD	12
13	EXISTING LOAD			20	1	20	1			EXISTING LOAD	14
15	EXISTING LOAD			20	1	20	1			EXISTING LOAD	16
17	EXISTING LOAD			20	1	20	1			EXISTING LOAD	18
19	EXISTING LOAD			20	1	20	1			EXISTING LOAD	20
21	EXISTING LOAD			20	1	20	1			EXISTING LOAD	22
23	SPARE			20	1	20	1			EXISTING LOAD	24
25	SPARE			20	1	20	1			EXISTING LOAD	26
27	SPARE			20	1	20	1			EXISTING LOAD	28
29	SPARE			20	1	20	1			EXISTING LOAD	30
31	SPARE			20	1	20	3			EXISTING LOAD	32
N 33	SITE LIGHTING (LOT D)	8	1.4	20	2	--	--			------	34
N 35	SITE LIGHTING (LOT D)	8	1.6	--	--	--	--			------	36
N 37	SITE LIGHTING (LOT B)	8	1.9	20	3					SPACE	38
N 39	SITE LIGHTING (LOT B)	8	1.4	--	--					SPACE	40
N 41	SITE LIGHTING (RING ROAD)	8	1.2	--	--					SPACE	42

KEY: *N = INSTALL NEW CIRCUIT BREAKER MATCHING EXISTING CONSTRUCTION AND RATINGS

EXISTING PANEL NAME: **EMK** — CONNECTED 1.9 KVA

TYPE: BOLT-ON | MAIN: 100A LUGS
MOUNTING: SURFACE | SOLID NEUTRAL | VOLTS: 480Y / 277
FED FROM: PANEL 'S2 EPP1' | GROUND BUS | PHASE: 3
K SCCR: 14,000 | WIRE: 4 K
E NOTES: E

Y * CKT NO.	LOAD DESCRIPTION	WIRE SIZE	LOAD KVA	BREAKER AMP	P	BREAKER AMP	P	LOAD KVA	WIRE SIZE	LOAD DESCRIPTION	CKT NO. Y *
1	EXISTING LOAD	--	--	70	3	20	1	1.9	8	SITE LIGHTING (LOT B & D)	2
3	------	--	--	--	--					SPACE	4
5	------	--	--	--	--					SPACE	6
7	SPACE									SPACE	8
9	SPACE									SPACE	10
11	SPACE									SPACE	12

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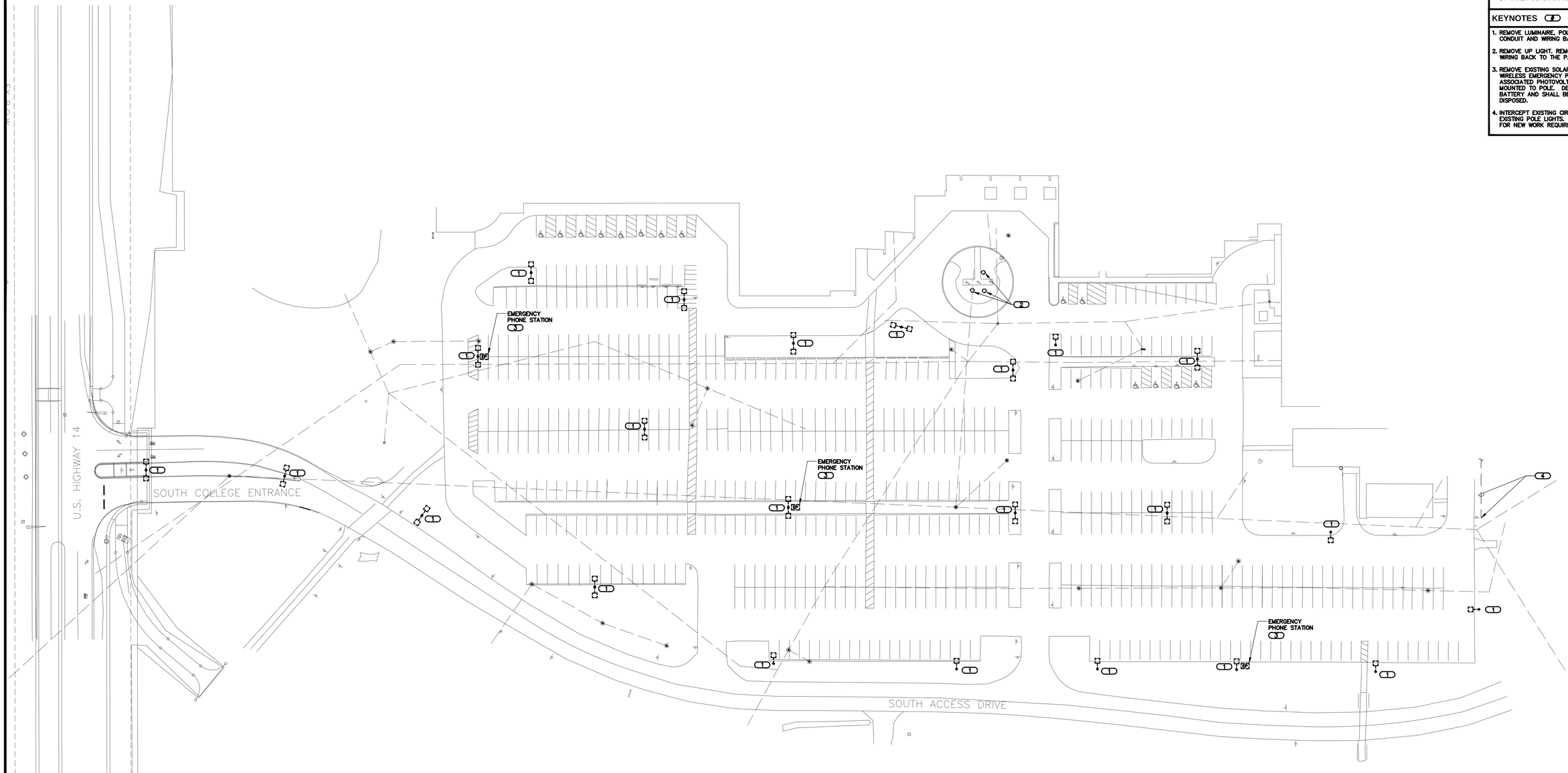
ELECTRICAL COVER SHEET

SHEET NO.
E0.00



GENERAL SHEET NOTES

1. REFER TO SHEET E0.00 FOR ELECTRICAL DEMOLITION NOTES AND ELECTRICAL DEMOLITION SYMBOL LIST.
2. EXISTING CONDUIT NOT BEING REUSED MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.

KEYNOTES

1. REMOVE LUMINAIRE, POLE, POLE BASE, CONDUIT AND WIRING BACK TO THE PANEL.
2. REMOVE UP LIGHT. REMOVE CONDUIT AND WIRING BACK TO THE PANEL.
3. REMOVE EXISTING SOLAR POWERED, WIRELESS EMERGENCY PHONE STATION AND ASSOCIATED PHOTOVOLTAIC PANEL MOUNTED TO POLE. DEVICE CONTAINS BATTERY AND SHALL BE PROPERLY DISPOSED.
4. INTERCEPT EXISTING CIRCUIT SERVING EXISTING POLE LIGHTS. REFER TO E1.01 FOR NEW WORK REQUIRED.

1 SITE PLAN - ELECTRICAL DEMOLITION

SCALE: 1"=40'-0"

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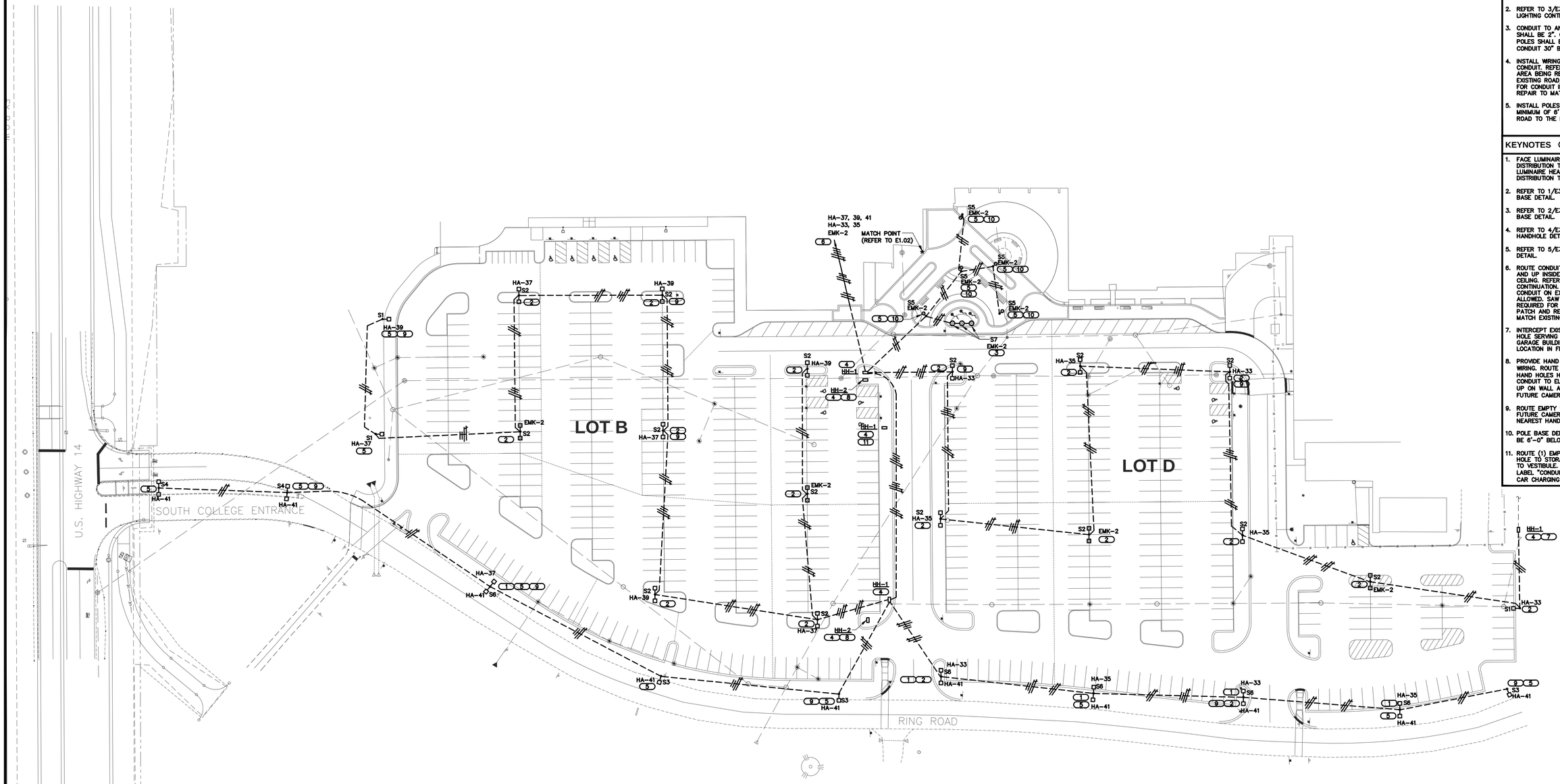
SITE PLAN – ELECTRICAL DEMOLITION

SHEET NO.
ED1.01

KJWW # 11.0721.00 – BBCHS Girls Locker Room Remodel || \\svkjwwnas4\k\12\12.0739.00\ED1.01.dwg 1/3"-4" = 1'-0" Wednesday, May 01, 2013 - 3:05pm By: kcascde



1 SITE PLAN - ELECTRICAL

SCALE: 1"=40'-0"

GENERAL SHEET NOTES

1. REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, ELECTRICAL INSTALLATION NOTES, GENERAL ELECTRICAL EQUIPMENT SCHEDULE, AND PANEL SCHEDULES.
2. REFER TO 3/E3.00 FOR EXTERIOR LIGHTING CONTROL WIRING.
3. CONDUIT TO AND BETWEEN HAND HOLES SHALL BE 2". CONDUIT TO AND BETWEEN POLES SHALL BE 1 1/4" C. INSTALL CONDUIT 30" BELOW GRADE.
4. INSTALL WIRING IN SCHEDULE 40 PVC CONDUIT. REFER TO CIVIL DRAWINGS FOR AREA BEING RESURFACED. SAW CUT EXISTING ROAD/PARKING AS REQUIRED FOR CONDUIT INSTALLATION. PATCH AND REPAIR TO MATCH EXISTING CONDITIONS.
5. INSTALL POLES ALONG RING ROAD WITH A MINIMUM OF 6' FROM THE EDGE OF THE ROAD TO THE EDGE OF THE POLE BASE.

KEYNOTES

1. FACE LUMINAIRE HEAD WITH TYPE 2 DISTRIBUTION TOWARDS RING ROAD AND LUMINAIRE HEAD WITH TYPE 4 DISTRIBUTION TOWARDS PARKING LOT.
2. REFER TO 1/E3.00 FOR EXTENDED POLE BASE DETAIL.
3. REFER TO 2/E3.00 FOR GROUND MOUNT BASE DETAIL.
4. REFER TO 4/E3.00 FOR EXTERIOR HANDHOLE DETAIL.
5. REFER TO 5/E3.00 FOR POLE BASE DETAIL.
6. ROUTE CONDUIT TO THE EXTERIOR WALL AND UP INSIDE THE ROOM TO ABOVE THE CEILING. REFER TO SHEET E1.02 FOR CONTINUATION. SURFACE MOUNTED CONDUIT ON EXTERIOR WALL IS NOT ALLOWED. SAW CUT SIDEWALK AS REQUIRED FOR CONDUIT INSTALLATION. PATCH AND REPAIR AS REQUIRED TO MATCH EXISTING CONDITIONS.
7. INTERCEPT EXISTING CIRCUIT IN NEW HAND HOLE SERVING TWO POLES BY THE GARAGE BUILDINGS. VERIFY HAND HOLE LOCATION IN FIELD.
8. PROVIDE HAND HOLE FOR FUTURE CAMERA WIRING. ROUTE (1) 2" CONDUIT BETWEEN HAND HOLES HH-2 AND ROUTE (1) 2" CONDUIT TO ELECTRICAL ROOM B181. STUB UP ON WALL AND LABEL "CONDUIT FOR FUTURE CAMERAS".
9. ROUTE EMPTY 1-1/4" CONDUIT FOR FUTURE CAMERA WIRING FROM POLE TO NEAREST HAND HOLE HH-2.
10. POLE BASE DEPTH FOR LUMINAIRE SHALL BE 6'-0" BELOW FINISHED GRADE.
11. ROUTE (1) EMPTY 4" CONDUIT FROM HAND HOLE TO STORAGE ROOM LOCATED NEXT TO VESTIBULE. STUB UP ON WALL AND LABEL "CONDUIT FOR FUTURE ELECTRIC CAR CHARGING STATION."

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SITE PLAN – ELECTRICAL

SHEET NO.
E1.01

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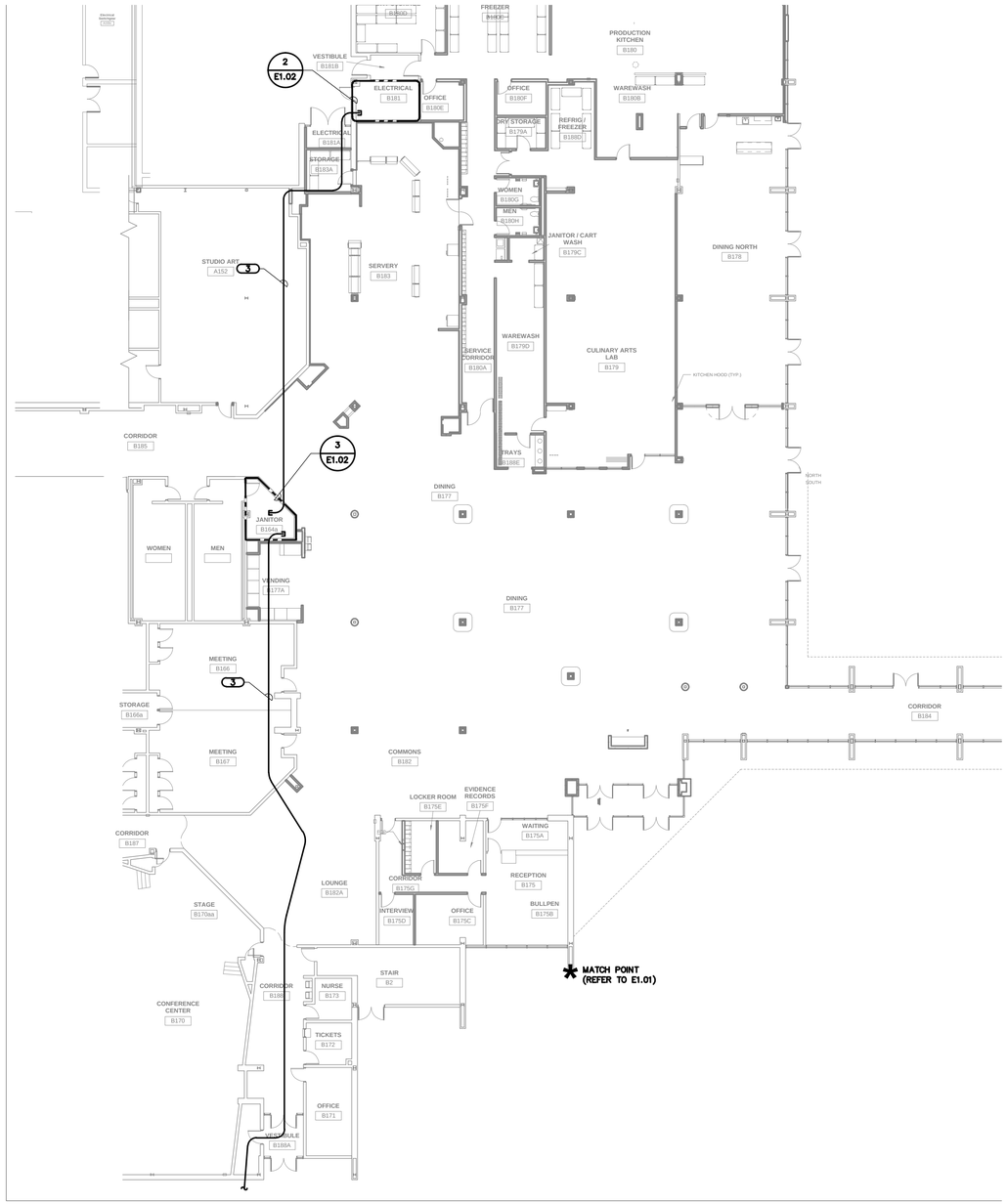
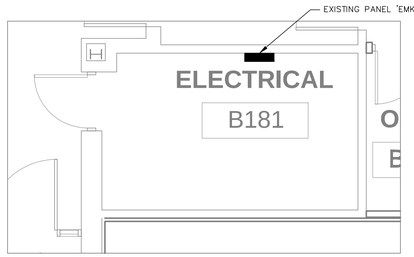


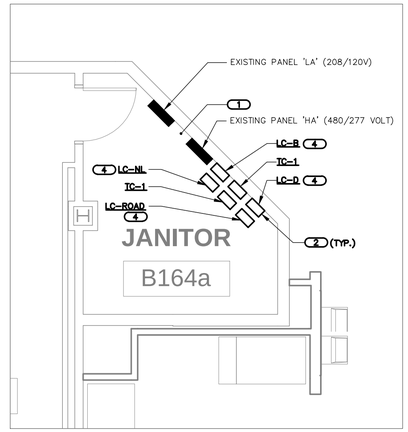
1 BUILDING B FLOOR PLAN - ELECTRICAL

SCALE: 1/16"=1'-0"



2 ENLARGED ELECTRICAL ROOM B181

SCALE: 1/4"=1'-0"



3 ENLARGED ELECTRICAL ROOM B164a

SCALE: 1/4"=1'-0"

GENERAL SHEET NOTES

1. REFER TO SHEET E0.00 FOR GENERAL ELECTRICAL NOTES, ELECTRICAL INSTALLATION NOTES, GENERAL ELECTRICAL EQUIPMENT SCHEDULE, AND PANEL SCHEDULES.
2. REFER TO 3/E3.00 FOR EXTERIOR LIGHTING CONTROL WIRING.

KEYNOTES

1. REMOVE EXISTING LIGHTING CONTRACTORS SERVING LIGHTS IN LOT B & D.
2. INSTALL ON THE WALL ABOVE AND/OR NEXT TO THE PANEL.
3. PROPOSED CONDUIT ROUTE. INSTALL CONDUIT ABOVE THE LAY-IN CEILING.
4. ROUTE CONDUIT AND WIRING (2#12 & 1#12 GND IN 3/4" C.) TO EXISTING PANEL 'LA'. CONNECT TO SPARE 20A/1P, 120V CIRCUIT BREAKER.

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BUILDING B FLOOR PLAN – ELECTRICAL

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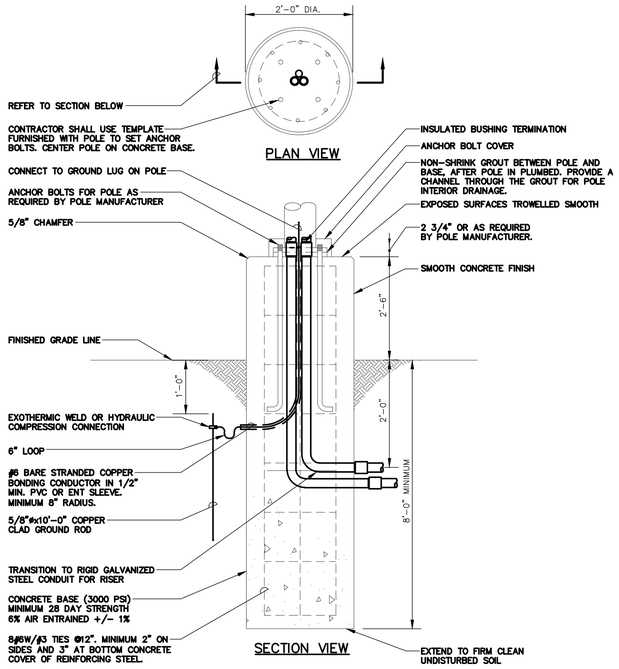
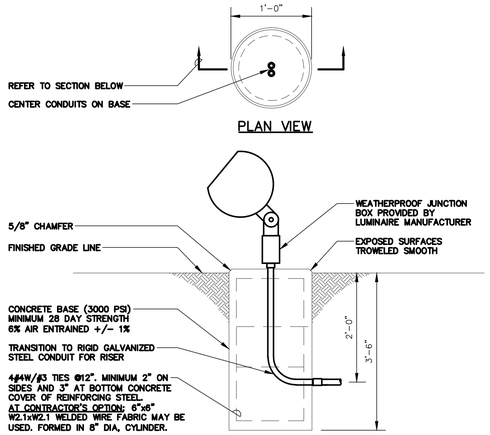


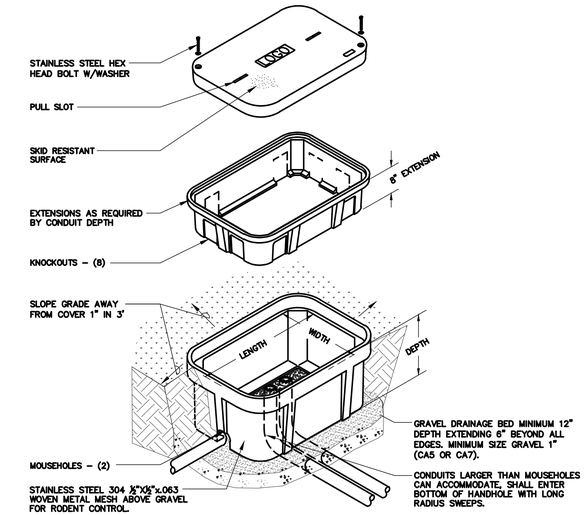
1 EXTENDED POLE BASE DETAIL

NO SCALE



2 GROUND MOUNT BASE DETAIL

NO SCALE

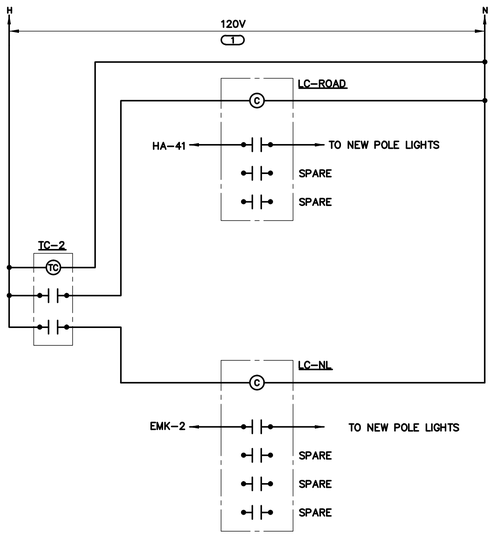


4 EXTERIOR HANDHOLE DETAIL

NO SCALE

NOTES:

1. ALL DIMENSIONS ARE NOMINAL INSIDE CLEARANCES.
2. ALL SPLICES OR DEVICES IN HANDHOLE SHALL BE SUBMERSIBLE AND UL LISTED.
3. SEAL ALL CONDUIT ENDS WITH DUCTSEAL

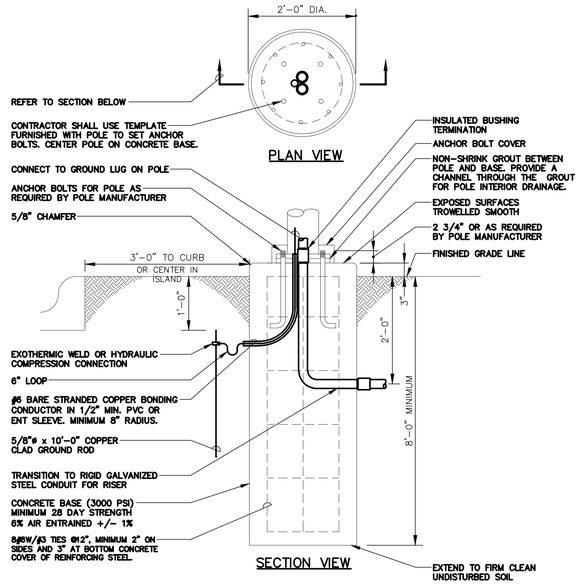


3 EXTERIOR LIGHTING CONTROL WIRING

NO SCALE

KEYNOTES:

1. ROUTE CONDUIT AND WIRING (2#12 & 1#12 GND IN 3/4" C.) TO EXISTING PANEL 'LA'. CONNECT TO SPARE 20A/1P, 120V CIRCUIT BREAKER.



5 POLE BASE DETAIL

NO SCALE

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