

| Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff May use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high velocity concentrated runoff may use filter cloth over inlet | Collects high veloci

T TEMPORARY MEASURE

PERMANENT MEASURE

Use geotextile and posts or poles May be constructed or prepackaged Easy to construct and locate as necessary

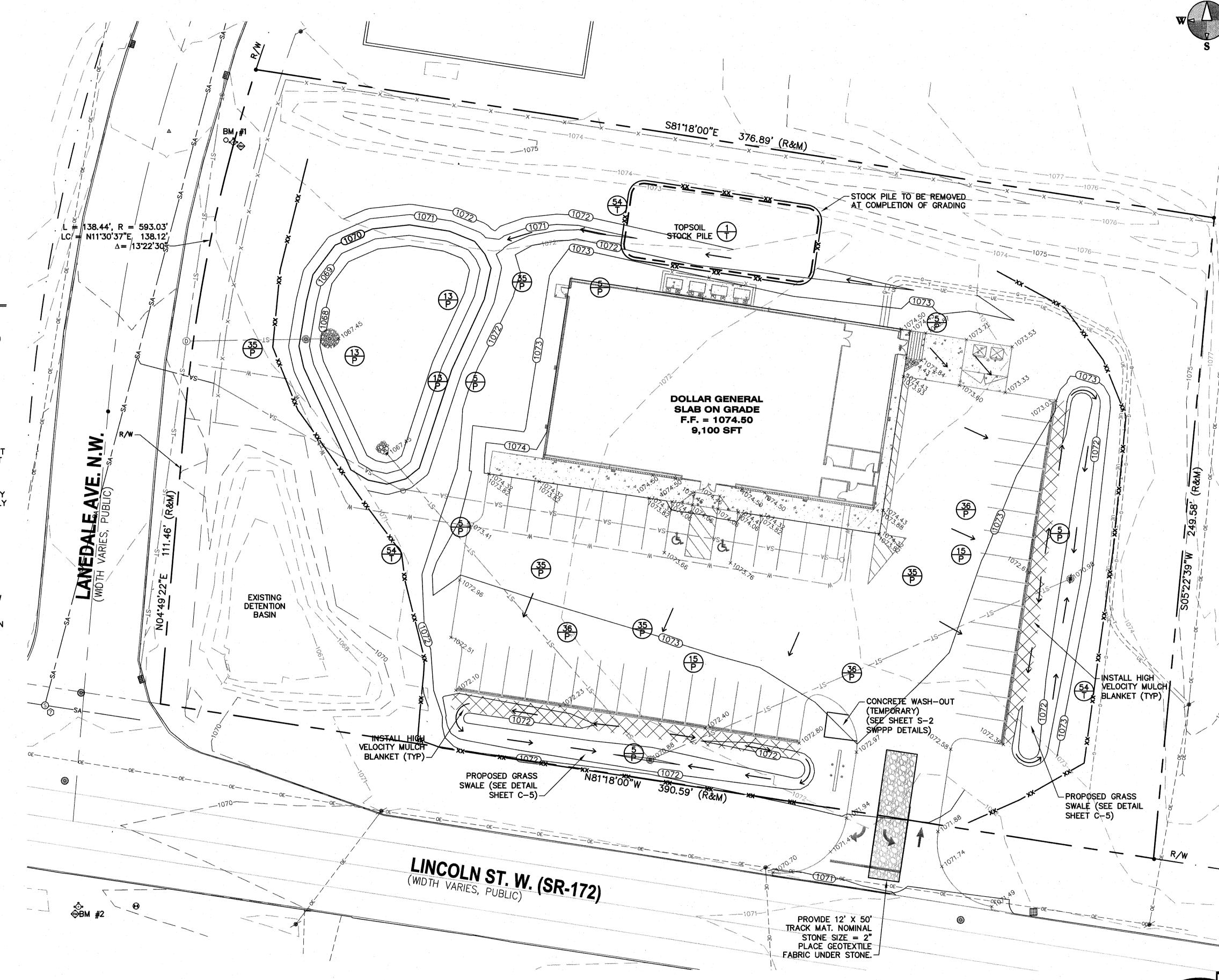
GRADING - SESC NOTES

- 1. MATCH EXISTING GRADES AROUND PERIMETER WITH SLOPES AS SHOWN.
- 2. ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT GRADES AT EDGE OF METAL (EOM) UNLESS OTHERWISE NOTED.
- 3. ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO MASS GRADING.
- 4. ALL EXCAVATION AND SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORT, PSI PROJECT NO. 0145687 ISSUED 11/05/2013.
- 5. ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
- 6. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. SCRAPE ROAD AT THE END OF EACH WORKDAY AND SWEEP AT LEAST ONCE A WEEK.
- 7. ANY DISTURBED AREA THAT WILL BE LEFT UNWORKED 5 DAYS OR LONGER MUST BE SEEDED AND MULCHED OR SODDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.
- 8. STRAW MULCH BLANKETS SHALL BE USED ON 3:1 SLOPES OR GREATER. ALL SLOPES ON SITE SHALL BE 4:1 OR LESS, UNLESS OTHERWISE DIRECTED BY ENGINEER.
- 9. ROAD RIGHTS-OF-WAY MUST BE STABILIZED WITH SEED AND MULCH WITHIN 5 DAYS OF COMPLETING UTILITY WORK IN THE RIGHT-OF-WAY.
- 10. AREAS OF EARTH CHANGE THAT ARE DISTURBED BEYOND THE FALL SEEDING DEADLINE (NOV. 1) MUST BE TEMPORARILY STABILIZED WITH A MINIMUM OF STRAW MULCH SECURELY CRIMPED TO THE GROUND.
- 11. ACCUMULATED SEDIMENT TO BE REMOVED FROM STORM SYSTEM UPON COMPLETION OF CONSTRUCTION. ALL TEMPORARY CONTROLS TO BE REMOVED AFTER SITE IS STABILIZED AND VEGETATION ESTABLISHED.

BENCHMARKS

BM # 1 ELEVATION = 1073.68 TOP NUT ON HYDRANT

BM # 2 ELEVATION = 1072.40 TOP NUT ON HYDRANT



TIMOTHY A
STEWART
E-75153
ONAL
UNDER THE SUPERVISION OF
TIMOTHY ALLEN STEWART, P.E.
OH LICENSE #75153

Sheet Title: Project:

Utilities Protection

FIELD WORK PERFORMED BY:

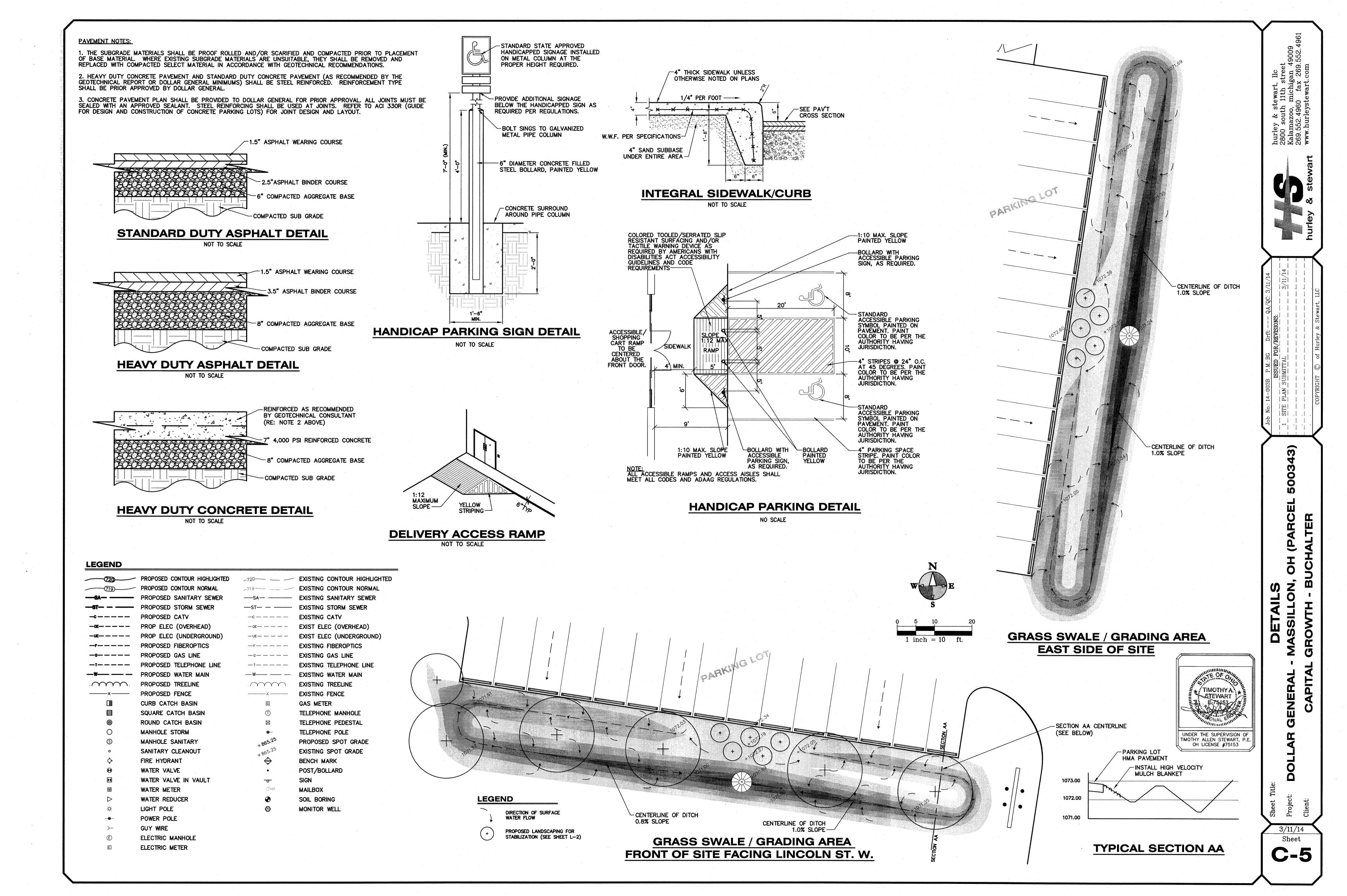
LANDTECH PROFESSIONAL SURVEYING

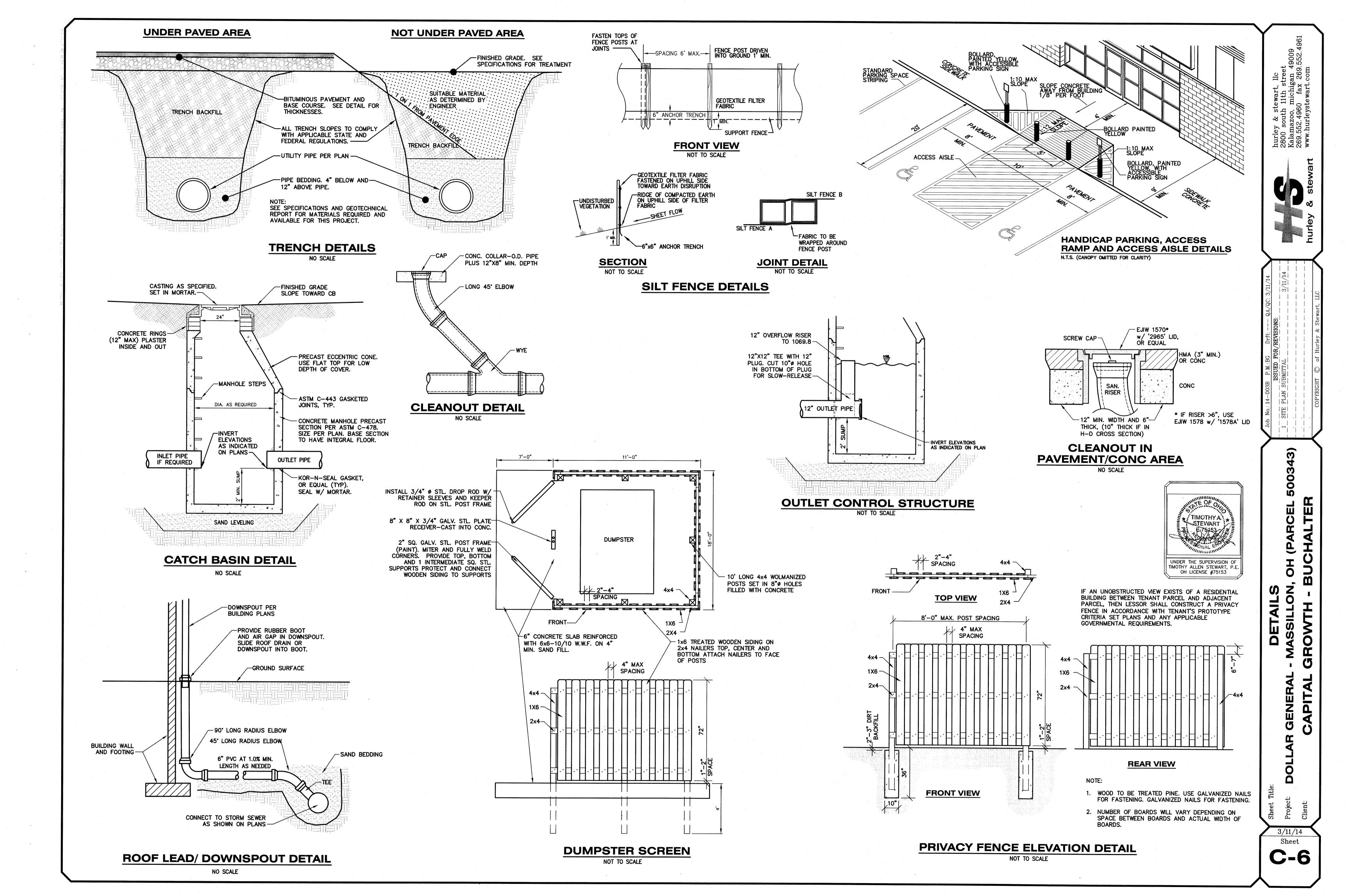
SERVICE

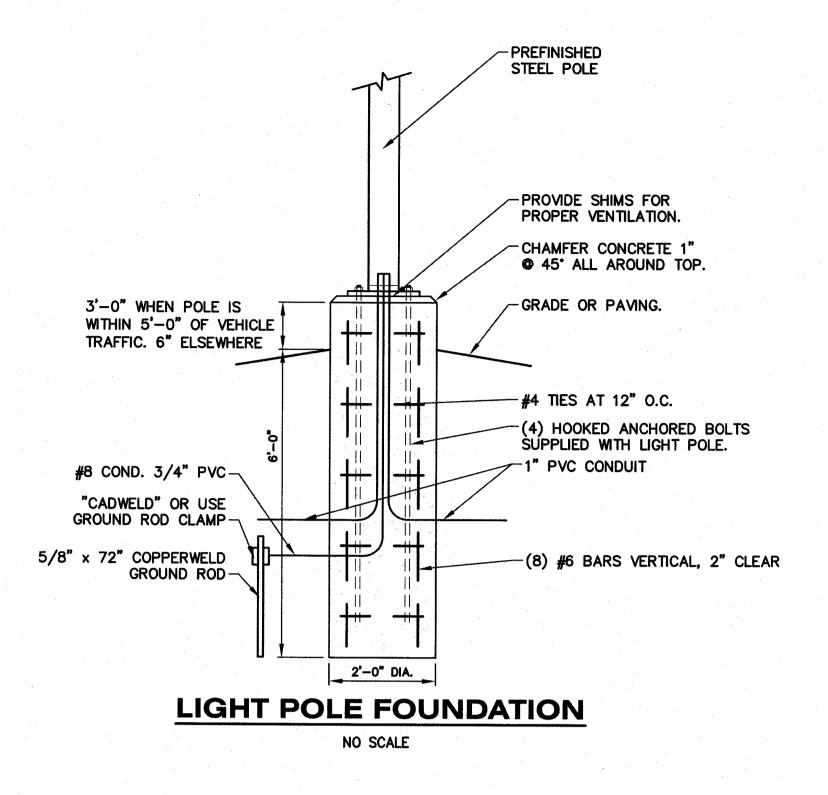
Call Before You Dig 1.800.362.2764

1 inch = 20

ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS
DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE
RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE
EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY
ARE THE ONLY UTILITIES IN THE AREA.







Luminaire Location Summary			
Label	Fix. Ht.	Orient	Tilt
Canopy Strips	10	0	0
Canopy Strips	10	0	0
Canopy Strips	10	0	0
Canopy Strips	10	0	0
Canopy Strips	10	0	0
Canopy Strips	10	0	0
Canopy Strips	10	0	0
MFHID-WPF-400PMH	12	0	0
MFHID-WPF-400PMH	12	0	0
MFHID-WPF-400PMH	12	0	0
MFHID-WPF-50PMH 12in	12	180	0
MFHID-PLL-400MH SBL Twin	25	90	0
MFHID-PLL-400MH SBL Twin	25	90	0
MFHID-PLL-400MH SBL Twin	25	180	0
MFHID-WPF-400PMH	16.5	270	0
MFHID-WPF-400PMH	16.5	270	0

LIGHTING PLAN BY:



Harris Lighting 4035 Reynolds Blvd. **Green Cove Springs, FL 32043** PH: 904-284-1220

UTILITY NOTES

- PROVIDE 1" BURRIED CONDUIT FROM ELECTRICAL PANEL TO LOCATION OF THE SIGN BASE. A TEMPORARY 3' TALL STAKE SHALL BE PROVIDED AT THE SIGN LOCATION UNTIL THE SIGN IS PERMANENTLY INSTALLED
- 2. UNDERGROUND ELECTRICAL SHALL BE PROVIDED TO THE SITE LIGHT POLES.

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min
Parking Lot CalcPts	Illuminance	Fc	7.46	43.4	0.7
Site CalcPts	Illuminance	Fc	0.55	12.9	0.0
**************************************	the management assessment assessment assessment at the same section of the same sectio		YOUR OF YOU PROMPTION OFFICE A COLUMN	andra and and and and and and	

Qty	Part Number	Description
5	MFHID-WPF-400MH	400W Full Cutoff Wall Packs
1	MFHID-WPF-50PMH	50W Full Cutoff Wall Packs
6	MFHID-PLL-400MH	400W Parking Lot Lighting ***NOTE: DO NOT tilt fixtures up, keep at 0 degree horizontal plane.
3	HW-F188A	25' Parking Lot Pole
3	HW-HID-PLL-MB	Twin Tenon Mounting Bracket
	HW-HID-PLL-SBL16	

Symbol	Qty	Label	Description	Arrangement	Lumens	LLF
	5	MFHID-WPF-400PMH	400W Full Cutoff Wall Pack	SINGLE	44000	0.72
J	7	Canopy Strips	Strip	SINGLE	2900	0.94
6 6	3	MFHID-PLL-400MH SBL Twin	Twin 400W Parking Lot Lighting w. SBL	TWIN	40000	0.72
	1	MFHID-WPF-50PMH 12in	50W Full Cutoff Wall Pack	SINGLE	3400	0.72
				A THE THE RESERVE THE THE THE THE THE THE THE THE THE TH		i
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b.o b.o b.o b.o b.o b.o b.o b.1 b.1 1.9 \$3.6 \$.7 \$1.7 \\ \frac{1}{1.4} \\ \frac{1}{1.4} \\ \frac{1}{1.4} \\ \frac{1}{1.0} \\ \frac{1}{0.4} \\ \frac{1}{0.1} \\ \frac{1}{0.0} \\ \f $\frac{28.4}{15.1}$ $\frac{1}{3.9}$ $\frac{1}{1.9}$ $\frac{2.0}{2.4}$ $\frac{2.4}{1.5}$ $\frac{1}{0.5}$ $\frac{1}{0.5}$ $\frac{1}{0.5}$ $\frac{1}{0.0}$ $\frac{1}{0.0}$ $\frac{1}{0.0}$ $\frac{1}{0.0}$ $\frac{1}{2}8.3$ $\frac{1}{1}5.2$ $\frac{4}{4.7}$ $\frac{4}{3.0}$ $\frac{4}{4.7}$ $\frac{5}{5.4}$ $\frac{1}{2}.8$ $\frac{5}{0.9}$ $\frac{5}{0.2}$ $\frac{5}{0.1}$ $\frac{5}{0.0}$ $\frac{5}{0.0}$ MFHID-WPF-400PMH $\frac{1}{42.5}$ $\frac{1}{14.8}$ $\frac{1}{6.8}$ $\frac{1}{6.8}$ $\frac{1}{4.8}$ $\frac{1}{1.5}$ $\frac{1}{5.4}$ $\frac{1}{5.0}$ $\frac{1}{5.0}$ $\frac{1}{5.0}$ b.o b.o b.o b.o b.o b.1 b.1 b.4 $\frac{2}{6.8}$ $\frac{1}{16.7}$ $\frac{1}{8.5}$ $\frac{1}{10.4}$ $\frac{1}{8.1}$ $\frac{1}{6.3}$ $\frac{1}{5.0}$ $\frac{1}{1.2}$ $\frac{1}{1.2}$ $\frac{1}{0.5}$ $\frac{1}{0.5}$ $\frac{1}{0.0}$ $\frac{1}{0.0}$ b.o b.o b.o b.1 b.1 b.1 b.2 b.5 5.8 15.1 20.2 15.5 5.8 4.9 Concessant productions of the state of the 29.1 16.1 8.7 5.0 12.1 10.3 6.3 3.2 1.1 5.2 5.1 6.0 5.0 MFHID-PLL-400MH SRI TWID b.o b.o b.1 b.1 b.2 b.2 b.3 b.5 40.2 13.7 6.1 7.4 5.5 12.6 8.1 3.6 5.7 5.1 5.0 6.0 5.0 5.1 5.1 5.3 5.6 1.1 1.0 1.5 2.9 3.5 10.8 10.0 5.4 11.6 7.3 1.1 3.0 2.3 2.7 2.6 14.2 5.6 10.6 5.9 7.4 5.6 2.9 1.1 b.0 b.1 b.2 b.4 b.8 b.9 \\ \frac{1}{1.5} \\ \frac{2}{2.9} \\ \frac{4.2}{4.7} \\ \frac{6.4}{5.4} \\ \frac{5.2}{5.2} \\ \frac{4.3}{3.5} \\ \frac{2}{5.0} \\ \frac{1}{1.4} \\ \frac{1}{1.2} \\ \frac{1}{1.0} \\ \frac{1}{1.0} \\ \frac{1}{1.2} \\ \frac{2}{5.9} \\ \frac{3}{5.4} \\ \frac{4}{5.4} \\ \frac{1}{5.4} \\ \frac{1}{5.2} \\ \frac{1}{5.4} \\ \frac{1}{5.4} \\ \frac{1}{5.2} \\ \frac{1}{5.4} \\ \frac{1}{5.4} \\ \frac{1}{5.2} \\ \frac{1}{5.4} \\ \frac a $\begin{vmatrix} 1.9 & 5.9 & 5.3 & 5.1 & 5.1 & 5.0 \end{vmatrix}$ $\begin{vmatrix} 5.0 & 5.0 & 5.0 \end{vmatrix}$ $\frac{1}{1.7}$ $\frac{1}{0.8}$ $\frac{1}{0.3}$ $\frac{1}{0.1}$ $\frac{1}{0.0}$ $\frac{1}{0.0}$



ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA. FIELD WORK PERFORMED BY: LANDTECH PROFESSIONAL SURVEYING

3/11/14 Sheet

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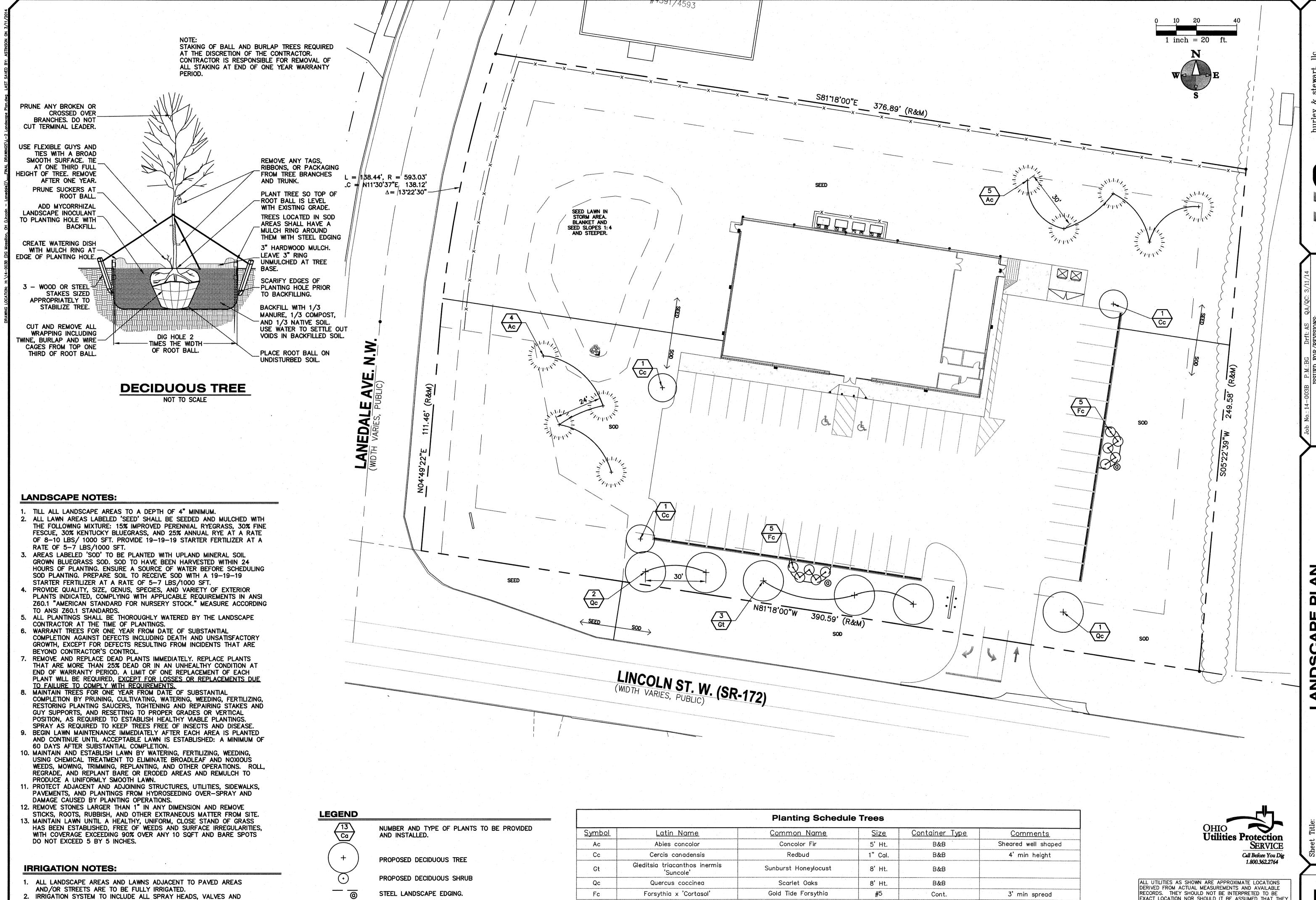
APITAL

GENER

PLAN

LIGHTNING

HALTE



CONTROLLERS.

3. A SEPARATE METER AND BACKFLOW PREVENTER WILL BE REQUIRED.

4. LOCATE HEADS A MINIMUM OF 2'-0" FROM EDGE OF PAVEMENT/ CURB.

0

RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.

FIELD WORK PERFORMED BY: LANDTECH PROFESSIONAL SURVEYING Sheet

3/11/14

GENERAL IRRIGATION SPECIFICATIONS 1 inch = 20 ft. 1. The irrigation system is diagrammatic based upon the information provided by the owner or the owner's representative. The successful contractor is responsible to install a system that will properly cover all areas indicated on the design. Actual layout of piping, sprinkler heads, valves, controllers and other related equipment shall be determined on site. Minor field changes shall be made at no additional cost to the owner. It is the responsibility of the irrigation contractor to be familiar with all grade differences, locations of walls, structures and utilities and make the necessary adjustments to accommodate the irrigation system as shown on the drawings. There may be times when it is obvious in the field that unknown obstructions, grades or dimensions that exist might not have been considered in the engineering, such obstructions should be brought to the attentions of the owner's authorized representative. In the event that this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions and costs that occur. 2. This system shall be installed using accepted and quality installation standards as used in the industry. All manufacturers specifications will be followed. 1" COPPER LINE AND 1" BACKFLOW APPROX, LOCATION. WATER SOURCE. INSTALL 1" RPZ INSIDE, COORDINATE 3. Mainline shall be buried a minimum of 12" of cover and a maximum of 18" WITH CONSTRUCTION MANAGER, IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH THE IRRIGATION SYSTEM. -USE ZONE 9 AS A TEMPORARY DRIP ZONE TO ESTABLISH of cover. Lateral line piping a minimum of 12" of cover. All backfill TREES. INSTALL 2 RINGS surrounding the pipe shall be cleaned of materials larger than 1" in size. AROUND EACH TREE AT THE ROOT BALL AS SHOWN. **DOLLAR GENERAL** Backfill shall be added in 6" increments and mechanically tamped. **SLAB ON GRADE** F.F. = 1074.509,100 SFT 4. There will be no substitutions or changes to the irrigation design allowed 9 1" Drip without direct, written approval from the Irrigation Consultant. For information, contact Wolf Creek Company, Inc. 5. System design is based on pressure and flow information provided by others, static pressure was given as 70 psi and the size of the P.O.C. is as indicated on the drawing. The irrigation contractor shall verify water pressures prior to construction. Report differences between requirements and the actual readings to the owner's representative. A booster pump may be necessary if the required pressure is not available. Additional costs shall be submitted to the owner as a change order. INSTALL CONTROLLER IN MECHANICAL 6. Piping shown in paved area without sleeve is diagrammatic and shall be ROOM. COORDINATE WITH CONSTRUCTION MANAGER. POWER TO 00 THE CONTROLLER BY OTHERS. 2" CONDUIT OUTSIDE OF ROOM FOR located inside of the planted area or turf area approximately 1' from any S WIRES BY G.C. INSTALL RAIN SENSOR ON GUTTER PER DETAILS. hardscape. 1" 16.2 Ш 1" 8.5 7. All valves shall be placed in valve boxes as shown in the details and all electrical connections shall be sealed with waterproof connectors. Control 1" 11.5 wire shall be solid copper wire U.L. approved for direct burial in the ground. 1" 12.2 See details. 8. Controller, rain sensor, meter, tap and backflow locations are as shown on the plan or as stated in the details and legend. All information is to be verified prior to any installation of the project. 9. The Irrigation Contractor is responsible for all clean up associated with his work. LINCOLN ST. W. (SR-172) (WIDTH VARIES, PUBLIC) 10. Irrigation contractor shall all provide the first winterization, spring turn on, head adjustments and controller maintenance in bid. 1 INSIDE WALL CLOSEST TO OUTSIDE LAWN & PLANTER AREAS. (2) FLOOR INSIDE BUILDING. IRRIGATION LEGEND E H APIT, 3 GFI RECEPTACLE AND LOCKING SWITCH. 110V POWER SOURCE FOR IRRIGATION Zone Station Number PVC Class 200 Mainline, TIMER. SEE LOCAL CODE. GEN IRRIGATION CONTROLLER, MOUNT ON INSIDE WALL OF BUILDING. INSTALL Size as noted on plans WITH PVC ELECTRICAL CONDUIT (GRAY). 0-INCH LINEAR LENGTH OF WIRE, Valve Size LONG SWEEP ELBOW, ELECTRICAL PVC Class 200 Lateral pipe, CONDUIT (GRAY) SCH40 PVC. SEE ELECTRIC CODE. Size as noted on plans WALL BRACKET STAND OFF TO ANCHOR CONDUIT TO WALL. SEE LOCAL ELEC., PLANT MATERIAL (TURF). WC3 DESIGN 4" POP-UP SPRAY SPRINKLEF BODY, INSTALL IN TURF AREAS DELECTRICAL CONDUIT (GRAY), SIZE 1" MINIMUM. FOR 110V POWER SUPPLY. SEE LOCAL ELECT. CODES. Irrigation Design & Consulting --- PVC SCH 80 NIPPLE (CLOSE) Sch 40 PVC Sleeving www.wc3design.com (8) ELECTRIC CONDUIT (GRAY) SCH40, FOR LOW VOLTAGE IRRIGATION CONTROL WIRE TO REMOTE CONTROL ZONE VALVE. SIZE TWICE THE SIZE OF WIRE **Utilities Protection** Tel: (412) 475-0045 SERVICE Rainbird ESP LX Controller Call Before You Dig Columbus, OH • Louisville, KY WRC RECEIVER Rainbird Rain Sensor Pittsburgh, PA 2 MODEL WRC2 (3) GUTTER OR WALL MOUNT Rainbird 1" Electric Valve 1 RAINBIRD ESP CONTROLLER ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE NOTE: MOUNT SENSOR ON ANY SURFACE WHERE IT WILL BE EXPOSED TO Rain Bird 5004-PC Turf Rotor RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE UNOBSTRUCTED RAINFALL, BUT NOT IN PATH OF SPRINKLER SPRAY, EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY **IRRIGATION NOTES:** 3/11/14 ARE THE ONLY UTILITIES IN THE AREA. NO MORE THAN 300' FROM RECEIVER UNIT. -PVC LATERAL PIPE MOUNT RECEIVER UNIT NO FURTHER THAN 6' FROM CONTROLLER. Rain Bird 3504-PC Turf Rotor Sheet FIELD WORK PERFORMED BY: 1. ALL LANDSCAPE AREAS AND LAWNS ADJACENT TO PAVED AREAS LANDTECH PROFESSIONAL SURVEYING AND/OR STREETS ARE TO BE FULLY IRRIGATED. RAINBIRD RAIN SENSOR Rainbird 1804 4" pop up spray |-4 RAINBIRD 1804 4" POP UP IRRIGATION SYSTEM TO INCLUDE ALL SPRAY HEADS, VALVES AND RAINBIRD DV-100 ELECTRIC VALVE with mpr nozzles, end and strip nozzle A SEPARATE METER AND BACKFLOW PREVENTER WILL BE REQUIRED. LOCATE HEADS A MINIMUM OF 2'-0" FROM EDGE OF PAVEMENT/ CURB **Backflow Preventer**

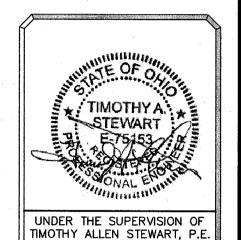
1 inch = 20

SITE SOILS:

SITE CLASSIFICATION "D"

SANDY SILT

USCS CLASSIFICATION: SM AND ML



OH LICENSE #75153

GRADING - SESC NOTES

TOTAL SITE AREA: 2.22 ACRES

TOTAL DISTURBED AREA: 1.72 ACRES

Utilities Protection

SERVICE Call Before You Dig

SITE AREA:

- MATCH EXISTING GRADES AROUND PERIMETER WITH SLOPES AS SHOWN.
- ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT GRADES AT EDGE OF METAL (EOM) UNLESS OTHERWISE
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED SOIL EROSION CONTROL PLAN AND THE PERMIT AS ISSUED BY STARK COUNTY. SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO MASS GRADING.
- ALL EXCAVATION AND SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORT, TERRACON PROJECT NO. N4125110 ISSUED JULY 26, 2012.
- ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF
- CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. SCRAPE ROAD AT THE END OF EACH WORKDAY AND SWEEP AT LEAST ONCE A WEEK.
- ANY DISTURBED AREA THAT WILL BE LEFT UNWORKED 5 DAYS OR LONGER MUST BE SEEDED AND MULCHED OR SODDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.
- STRAW MULCH BLANKETS SHALL BE USED ON 3:1 SLOPES OR GREATER. ALL SLOPES ON SITE SHALL BE 4:1 OR LESS, UNLESS OTHERWISE DIRECTED BY ENGINEER.
- ROAD RIGHTS-OF-WAY MUST BE STABILIZED WITH SEED AND MULCH WITHIN 5 DAYS OF COMPLETING UTILITY WORK IN THE RIGHT-OF-WAY.
- AREAS OF EARTH CHANGE THAT ARE DISTURBED BEYOND THE FALL SEEDING DEADLINE (NOV. 1) MUST BE TEMPORARILY STABILIZED WITH A MINIMUM OF STRAW MULCH SECURELY CRIMPED TO THE GROUND.
- ACCUMULATED SEDIMENT TO BE REMOVED FROM STORM SYSTEM UPON COMPLETION OF CONSTRUCTION. ALL TEMPORARY CONTROLS TO BE REMOVED AFTER SITE IS STABILIZED AND VEGETATION ESTABLISHED.
- 12. SEE SHEET L-1 FOR PERMANENT AND TEMPORARY SEEDING NOTES.
- 13. SEE SHEET L-1 FOR BEST MANAGEMENT PRACTICES AND CONSTRUCTION SEQUENCE SCHEDULE.
- 14. THE CONTRACTOR SHALL PREVENT AND/OR REDUCE AND CONTROL SOIL EROSION RESULTING FROM THE PROPOSED IMPROVEMENTS. THE USE OF SILT FENCING, JUTE MATTING, TEMPORARY SEEDING, SILT CHECKS, INLET PROTECTION AROUND ALL CATCH BASINS, STABILIZED CONSTRUCTION ENTRANCE(S), ETC. WILL BE REQUIRED. SEDIMENT CONTROL STRUCTURES/DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL RAINWATER AND LAND DEVELOPMENT — OHIO'S STANDARDS FOR STORM WATER MANAGEMENT, LAND DEVELOPMENT AND URBAN STREAM PROTECTION. SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS SET FORTH ON THE APPROVED STORM WATER POLLUTION PREVENTION PLAN IF APPLICABLE, OR AS DETAILED ON THE CONSTRUCTION PLANS. AS SPECIFIED BY THE

CITT	CITY OF MASSILLON.												
STORM SEWER STRUCTURE SCHEDULE													
STR. #	RIM EL.	DIAM.	CASTING	PIPES IN:	PIPES OUT								
CB-1	1070.98	4'	5105 M1	e tradition and the state of th	12" SW: 1068.55								
CB-2	1070.88	4'	5105 M1	12" NE: 1067.96	15" NW: 1067.96								
MH-5	1070.47	4'	1120 B	12" E: 1067.23 EX 12" N: 1067.23	EX 12" S: 1067.23								
0S-3	1069.14	4'	6508		8" W: 1067.45								

6508 8" E: 1067.41 12" W: 1067.41 *SEE SHEET C-5 FOR OUTLET CONTROL STRUCTURE DETAILS

OS-4 | 1069.45 | 4' |

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

PROVIDE 12' X 50'

PLACE GEOTEXTILE

TRACK MAT NOMINAL STONE SIZE = 2"

FABRIC UNDER STONE.

KEY	DETAIL	CHARACTERISTICS
5	Seeding	Inexpensive & very effective Stabilizes soil, thus minimizing erosion Permits runoff to infiltrate soil, reducing runoff volume Should include prepared topsoil bed
13	Riprap, Rubble, Gabions	Used where vegetation is not easily established Effective for high velocities or high concentrations Permits runoff to infiltrate soil Dissipates energy flow at system outlets
15	Paving	Protects areas which cannot otherwise be protected, but increases runoff volume and velocity Irregular surface will help slow velocity
35	Storm Sewer C.B.	System removes collected runoff from site, particularly from poved areas Can accept large concentrations of runoff Conducts runoff to municipal sewer system or stabilized outfall location. Use catch basins to collect sediment
36	Catch Basin, Drain Inlet	Collects high velocity concentrated runoff May use filter cloth over inlet. See paved storm sewer inlet detail.

May be constructed or prepackage Easy to construct and locate as necessary

PERMANENT

THE OVERALL SEDIMENT AND EROSION CONTROL SCHEME IS DEVISED TO PREVENT POLLUTED RUNOFF FROM LEAVING THE SITE BOUNDARIES OR ENTERING THE EXISTING STORM SYSTEM DURING CONSTRUCTION. SILT FENCE IS IMPLEMENTED AT ALL CONSTRUCTION PERIMETERS AND THE TOPSOIL STOCK PILE AREA.

SWPPP NOTES

WATER QUALITY WILL BE ADDRESSED THROUGH THE INSTALLATION OF ADS FLEXSTORM INLET FILTERS.

I, THE UNDERSIGNED, CERTIFY THAT I UNDERSTAND AND WILL ADHERE TO THE REQUIREMENTS, TERMS, AND CONDITIONS OF THE STORM WATER POLLUTION PREVENTION PLAN REVIEWED AND APPROVED BY THE STARK SOIL AND WATER DISTRICT FOR COMPLIANCE WITH THE STARK COUNTY WATER QUALITY REGULATIONS FOR THE ABOVE REFERENCED PROJECT.

4/22/13 Sheet

DATE

PROPOSED DETENTION BASIN **DOLLAR GENERAL SLAB ON GRADE** F.F. = 1074.509,100 SFT

UTILITY NOTES 1. FOR PROTECTION OF UNDERGROUND UTILITIES, CALL THE OHIO UTILITIES PROTECTION SERVICE AT 1-800-362-2764 A MINIMUM OF 48 HOURS PRIOR TO EXCAVATING.

2. ALL MATERIAL AND CONSTRUCTION WILL BE IN ACCORDANCE WITH THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) DATED JANUARY 1,2010. ODOT SPECIFICATIONS ARE SUBJECT TO THE CURRENT ADDENDA. IN ADDITION, ALL WORK WILL BE IN COMPLIANCE WITH ALL APPLICABLE FEDERAL AND STATE STANDARDS AND REGULATIONS.

3. ALL BEDDING MATERIAL TYPES ARE TO BE PER ODOT SPEC. 603.06.

4', R = 593.03'

30'37"E, 138.12', $\Delta = /13^{\circ}22'30^{\circ}_{3}$

- ALL BACKFILL MATERIAL TYPES ARE TO BE PER ODOT SPEC. 603.10.
- GRANULAR MATERIAL OR CDF SHALL BE USED FOR BACKFILLING ALL TRENCHES UNDER PAVEMENT AND/OR ANY PORTION OF THE TRENCH THAT IS WITHIN 5 FT. OF THE PAVEMENT EDGE OR CURB. PAVEMENT SHALL INCLUDE BUT IS NOT LIMITED TO; ROADWAYS, SIDEWALKS, SERVICE WALKS, DRIVEWAY APPROACHES, PARKING LOTS OR ANY PROPOSED PAVED SURFACE.
- 6. SOIL EROSION AND SEDIMENTATION BEST MANAGEMENT PRACTICE (BMP) MEASURES WILL BE INSTALLED PRIOR TO START OF ANY CONSTRUCTION AND WILL BE MAINTAINED AT ALL TIMES UNTIL CONSTRUCTION HAS BEEN COMPLETED, INCLUDING ALL GRASS BEING WELL ESTABLISHED AND/OR PERMANENT EROSION AND SEDIMENTATION BMP MEASURES ARE IN PLACE.
- CONTRACTOR IS TO DESIGNATE A SITE DUMP/WASH AREA PRIOR TO STARTING CONSTRUCTION FOR SUCH PURPOSES AS WASHING OUT CONCRETE TRUCKS AND DUMPING NON—HAZARDOUS WASTE MATERIALS. DUMPING OR DISCHARGE OF ANY WASTE MATERIALS TO ANY SEWERS IS PROHIBITED. HAZARDOUS WASTES ARE TO BE REMOVED OFF SITE AND PROPERLY DISPOSED OF CONSISTENT WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
- COORDINATE ALL UTILITY LOCATIONS AND ELEVATIONS WITH MECHANICAL DRAWINGS AND BUILDING CONTRACTOR PRIOR TO INSTALLATION.
- REMOVE SEDIMENT FROM ALL STRUCTURES ONCE PAVING IS COMPLETE AND REMOVE SILT SACKS.
- 10. SANITARY SEWER MATERIALS AND INSTALLATION SHALL COMPLY WITH THE OHIO EPA AND STARK COUNTY REQUIREMENTS. COORDINATE WORK AND INSPECTIONS WITH THE OHIO EPA AND STARK COUNTY.
- 11. WATER SUPPLY MATERIALS AND INSTALLATION SHALL COMPLY WITH THE OHIO EPA REQUIREMENTS AND SPECIFICATIONS.
- 12. CONTRACTOR TO COORDINATE PRIVATE UTILITY CONNECTIONS WITH UTILITY COMPANIES.
- 13. PLACE SANITARY CLEANOUT EVERY 100' AND/OR AT BENDS ON ALL 6" SANITARY SEWER LEADS.
- 14. ALL STRUCTURE CASTINGS TO BE EAST JORDAN IRON WORKS OR APPROVED EQUAL. SEE STRUCTURE TABLE FOR SPECIFIC CASTING AT EACH STRUCTURE.
- 15. THE CONTRACTOR SHALL INSTALL PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
- 16. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR GROUNDWATER AND SOILS INFORMATION. ANY UTILITIES REQUIRING DEWATERING SHALL BE INSTALLED TO STARK COUNTY STANDARDS AND INCLUDED IN THE INSTALLATION COSTS. CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING NECESSARY TO CONSTRUCT UTILITIES IN THE DRY.
- 17. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
- 18. ADS FLEXSTORM INLET FILTERS ARE TO BE INSTALLED IN EACH CATCH BASIN WITHIN THE PARKING AREA. COORDINATE FILTER MODEL AND INSTALLATION METHOD WITH MANUFACTURER.

GRASSED SWALE DETAIL

GRASSED SWALE: OPERATION & MAINTENANCE

- 1. ALL TREES, BRUSH, STUMPS, AND OTHER UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE.
- 2. THE CHANNEL SHALL BE EXCAVATED AND SHAPED TO THE PROPER GRADE AND
- 3. FILL MATERIAL USED IN THE CONSTRUCTION OF THE CHANNEL SHALL BE WELL COMPACTED IN UNIFORM LAYERS NOT EXCEEDING 9 INCHES USING THE WHEEL TREADS OR TRACKS OF THE CONSTRUCTION EQUIPMENT TO PREVENT UNEQUAL
- 4. EXCESS EARTH SHALL BE GRADED OR DISPOSED OF SO THAT IT WILL NOT RESTRICT FLOW TO THE CHANNEL OR INTERFERE WITH ITS FUNCTIONING.
- 5. STABILIZATION SHALL BE DONE ACCORDING TO THE APPROPRIATE SPECIFICATIONS FOR PERMANENT SEEDING, VEGETATIVE PRACTICES, SODDING AND MATTING.
- 6. CONSTRUCTION SHALL BE SEQUENCED SO THAT NEWLY CONSTRUCTED CHANNELS ARE STABILIZED PRIOR TO BECOMING OPERATIONAL. TO AID IN THE ESTABLISHMENT OF VEGETATION, SURFACE WATER MAY BE PREVENTED FROM ENTERING THE NEWLY CONSTRUCTED CHANNEL THROUGH THE ESTABLISHMENT
- 7. GULLIES THAT MAY FORM IN THE CHANNEL OR OTHER EROSION DAMAGE THAT OCCURS BEFORE THE GRASS LINING BECOMES ESTABLISHED SHALL BE REPAIRED WITHOUT DELAY.

SUMMARY OF DETENTION BASIN DRAINAGE CALCULATIONS

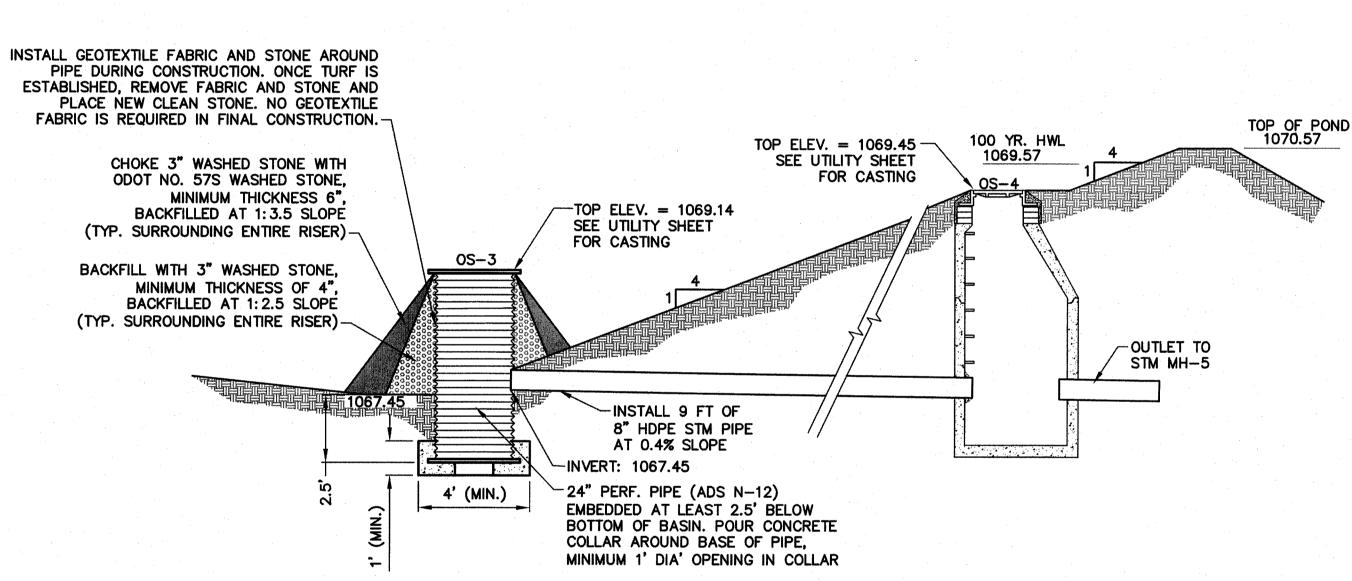
STORM DESIGN FREQUENCY (YEARS)	WATER QUALITY	1	2	5	10	10 DURING CONSTRUCTION	25	50	100
PRE-DEVELOPED PEAK FLOW (CFS)	N/A	1.56	1.72	3.3	4.07	4.07	4.85	5.85	6.25
POST-DEVELOPED UNCONTROLLED PEAK FLOW (CFS)	N/A	2.89	3.1	5.06	5.95	5.95	6.85	7.98	8.43
POST-DEVELOPED PEAK FLOW FROM BASIN (CFS)		1.12	1.18	1.67	1.87	1.87	2.00	2.18	2.32
DESIGN PEAK WATER ELEVATION (FT)		1068.22	1068.28	1068.77	1068.99	1068.99	1069.2	1069.47	1069.57
DESIGN STORAGE VOLUME REQUIRED (CF)		2302	2478	4223	5067	5067	5953	7102	7552
AS-CONSTRUCTED PEAK FLOW FROM BASIN (CFS)	·				·			**************************************	
AS-CONSTRUCTED PEAK WATER ELEVATION (FT)	· · · · · · · · · · · · · · · · · · ·								
AS-CONSTRUCTED STORAGE VOLUME PROVIDED (CFT)		······							

STRAW BALE (ALT. MATERIALS OR PRODUCTS MAY BE USED

- WOOD OR METAL STAKES TO SECURE THE STRAW BALES (2

STAPLES TO SECURE THE POLYETHYLENE LINING TO THE STRAW BALES

FASTEN TOPS OF FENCE POSTS AT JOINTS -



TO PROVIDE STRUCTURAL CONTAINMENT. ALTERNATIVE MATERIALS WILL REQUIRE DESIGN MODIFICATION. POLYETHYLENE LINING BLACK LETTERS (10 MM); THE LINING SHOULD EXTEND OVER 6" HEIGHT 0.5" LAG THE STRAW BALES. SCREWS -**BELOW GRADE PLAN VIEW** - WOOD POST 3" X 3" X 8' **CONCRETE WASHOUT ABOVE GRADE PLAN VIEW** SIGN DETAIL PLASTIC LINING -STAPLE DETAIL POLYETHYLENE LINING (10 MM); THE LINING SHOULD EXTEND OVER THE STRAW BALES.— - WOOD OR METAL STAKES TO SECURE THE STRAW BALES (2 STAPLES (2 PER BALE) -PER BALE) NATIVE MAT'L **SECTION B-B** NOTES: 1. ACTUAL LAYOUT DETERMINED IN FIELD. 2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF TEMPORARY CONCRETE WASHOUT FACILITY **SECTION A-A**

SLOW RELEASE OVERFLOW DETAIL

SEEDING NOTES:

- 1. ALL LAWN AREAS SHALL BE SEEDED AND MULCHED WITH THE FOLLOWING MIXTURE: 20% IMPROVED PERENNIAL RYEGRASS, 40% FINE FESCUE, AND 40% KENTUCKY BLUEGRASS AT A RATE OF 8-10 LBS / 1000 SFT. PROVIDE 19-19-19 STARTER FERTILIZER AT A RATE OF 5-7 LBS/1000
- 2. BEGIN LAWN MAINTENANCE IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE UNTIL ACCEPTABLE LAWN IS ESTABLISHED: A MINIMUM OF 60 DAYS AFTER SUBSTANTIAL COMPLETION.
- 3. MAINTAIN AND ESTABLISH LAWN BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, REPLANTING, AND OTHER OPERATIONS. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS AND REMULCH TO PRODUCE A UNIFORMLY SMOOTH LAWN.
- 4. PROTECT ADJACENT AND ADJOINING STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND PLANTINGS FROM HYDROSEEDING OVER-SPRAY AND DAMAGE CAUSED BY PLANTING OPERATIONS.
- 5. REMOVE STONES LARGER THAN 1" IN ANY DIMENSION AND REMOVE STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER FROM SITE.
- 6. MAINTAIN LAWN UNTIL A HEALTHY, UNIFORM, CLOSE STAND OF GRASS HAS BEEN ESTABLISHED, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH COVERAGE EXCEEDING 90% OVER ANY 10 SQFT AND BARE SPOTS DO NOT EXCEED 5 BY 5 INCHES.
- 7. SEED TOPSOIL STORAGE LOCATION AND ANY SOIL AREAS EXPOSED MORE THAN TWO WEEKS WITH AN ANNUAL GRASS MIX TO PREVENT SOIL EROSION.

SESC Construction and Maintenance Schedule

Project Name: Massillon Dollar General Project Start Date: June 2014 Project End Date: October 2014

Construction Schedule

Construction Sequence	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Temporary SESC Measures						Х	Х					
Strip and Stock Pile						Х						
Rough Grading						X	Х					
Underground Utilities	e sa e e e e					Х	X		1 1 1 1 1 1 1 1 1 1	:	-	
Pavement Installation		-						Х	Х	X		
Building Construction							Х	Х	Х	Х		Í
Permanent SESC Measures						Х	Х	Х	Х	Х		
Final Grading						**		Χ	Х	Х		l
Landscaping						-		Х	Х	Х		

Maintenance Schedule

Maintenance Sequence	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Street Sweeping				1 1		Х	Х	Χ	Х	Х		. : : :
Silt Fence Installation						Х	Х	Х	Х	Χ		
Maintain Buffer Strips						Х	Х	Х	Х	Χ		
Seeding and Mulch		*						Х	Х	Х		
Sediment Basins								Х	χ	Х		
Rip Rap								Х	Х	Х		
Remove Temporary SESC Measures												

CONCRETE WASH-OUT NOT TO SCALE

FLAGGING ON

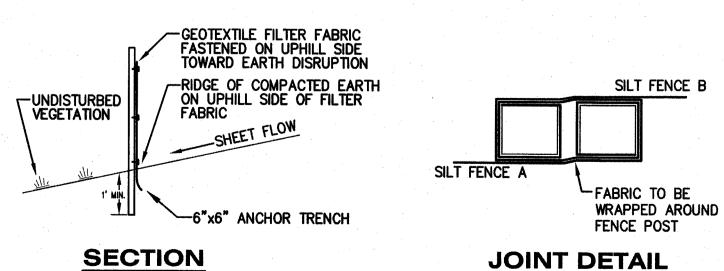
SPACING 6' MAX. FENCE POST DRIVEN INTO GROUND 1' MIN

NOT TO SCALE

GEOTEXTILE FILTER FABRIC

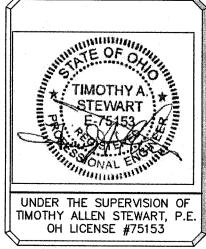
FRONT VIEW NOT TO SCALE

6" ANCHOR TRENCH ∭



NOT TO SCALE

SILT FENCE DETAILS NOT TO SCALE



3/11/14

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