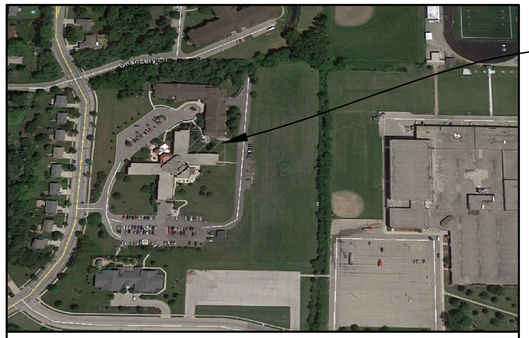
ONSITE CIVIL ENGINEERING INFRASTRUCTURE PLANS

FOR

LINDEN GROVE

WAUKESHA, WISCONSIN



LOCATION MAP
SCALE: NTS

INDEX OF SHEETS

LEGEND

	EXISTING	PROPOSED
SANITARY SEWER MANHOLE		
STORM SEWER MANHOLE		
STORM SEWER CATCH BASIN (ROUND CASTING)		
STORM SEWER CATCH BASIN (RECTANGULAR CASTING)		
PRECAST FLARED END SECTION		
CONCRETE HEADWALL		
AIR RELEASE ASSEMBLY		
VALVE BOX		
FIRE HYDRANT		
BUFFALO BOX		
CLEANOUT		
SANITARY SEWER		
FORCE MAIN		
STORM SEWER		
DRAIN TILE		
WATER MAIN	W	W
FIRE PROTECTION		FP
UTILITY CROSSING		
GRANULAR TRENCH BACKFILL		
LIGHTING		
ELECTRICAL CABLE	E	E
OVERHEAD WIRES	OHW	OHW
CAUTION EXISTING UTILITIES NEARBY		CAUTION
ELECTRICAL TRANSFORMER OR PEDESTAL	E	
POWER POLE		
POWER POLE WITH LIGHT		
GUY WIRE		
STREET SIGN		
GAS MAIN	G	G
TELEPHONE LINE	T	T
CONTOUR	749	749
SPOT ELEVATION	×(750.00)	+750.00
WETLANDS	WET	
PRIMARY ENVIRONMENTAL CORRIDOR	PEC	
FLOODWAY		
FLOODPLAIN		
HIGH WATER LEVEL (HWL)		
NORMAL WATER LEVEL (NWL)		
DIRECTION OF SURFACE FLOW		GRADE / PAVEMENT
DITCH OR SWALE		
DIVERSION SWALE		
OVERFLOW RELIEF ROUTING		
TREE WITH TRUNK SIZE	6" / 6"	
SOIL BORING		
TOPSOIL PROBE		
FENCE LINE, TEMPORARY SILT	SF	SF
FENCE LINE, WIRE		
FENCE LINE, CHAIN LINK OR IRON		
FENCE LINE, WOOD OR PLASTIC		
CONCRETE SIDEWALK		
CURB AND GUTTER		
DEPRESSED CURB		
REVERSE PITCH CURB & GUTTER		
EASEMENT LINE		

ABBREVIATIONS

BL	BASE LINE	NWL	NORMAL WATER LEVEL
C	LONG CHORD OF CURVE	PC	POINT OF CURVATURE
C & G	CURB AND GUTTER	PT	POINT OF TANGENCY
CB	CATCH BASIN	PVI	POINT OF VERTICAL INTERSECTION
CL	CENTERLINE	R	RADIUS
D	DEGREE OF CURVE	ROW	RIGHT-OF-WAY
EP	EDGE OF PAVEMENT	SAN	SANITARY SEWER
FF	FINISHED FLOOR	ST	STORM SEWER
FG	FINISHED GRADE	T	TANGENCY OF CURVE
FL	FLOW LINE	TB	TOP OF BANK
FP	FLOODPLAIN	TC	TOP OF CURB
FR	FRAME	TF	TOP OF FOUNDATION
FW	FLOODWAY	TP	TOP OF PIPE
HWL	HIGH WATER LEVEL	TS	TOP OF SIDEWALK
INV	INVERT	TW	TOP OF WALK
L	LENGTH OF CURVE	WM	WATER MAIN
MH	MANHOLE	△	INTERSECTION ANGLE

PROJECT TEAM CONTACTS

CIVIL ENGINEER:
FRED SPELSHAUS, P.E.
PINNACLE ENGINEERING GROUP
15850 BLUEMOUND ROAD, SUITE 310
BROOKFIELD, WI 53005
(262) 754-8888

GENERAL NOTES

1. THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO SET FORTH PERFORMANCE AND CONSTRUCTION MATERIAL STANDARDS FOR THE PROPER EXECUTION OF WORK. ALL WORKS CONTAINED WITHIN THE PLANS AND SPECIFICATIONS SHALL BE COMPLETED IN ACCORDANCE WITH ALL REQUIREMENTS FROM LOCAL, STATE, FEDERAL OR OTHER GOVERNING AGENCY'S LAWS, REGULATIONS, JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., AND THE OWNER'S DIRECTION.
2. THE CONTRACTOR IS RESPONSIBLE TO REVIEW AND UNDERSTAND ALL COMPONENTS OF THE PLANS AND SPECIFICATIONS, INCLUDING FIELD VERIFYING SOIL CONDITIONS, PRIOR TO SUBMISSION OF A BID PROPOSAL.
3. THE CONTRACTOR SHALL PROMPTLY REPORT ANY ERRORS OR AMBIGUITIES LEARNED AS PART OF THEIR REVIEW OF PLANS, SPECIFICATIONS, REPORTS AND FIELD INVESTIGATIONS.
4. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COMPUTATION OF QUANTITIES AND WORK REQUIRED TO COMPLETE THIS PROJECT. THE CONTRACTOR'S BID SHALL BE BASED ON ITS OWN COMPUTATIONS AND IN NO SUCH INSTANCE RELY ON THE ENGINEER'S ESTIMATE.
5. QUESTIONS/CLARIFICATIONS WILL BE INTERPRETED BY ENGINEER/OWNER PRIOR TO THE AWARD OF CONTRACT. ENGINEER/OWNER WILL SUBMIT OFFICIAL RESPONSES IN WRITING. INTERPRETATIONS PRESENTED IN OFFICIAL RESPONSES SHALL BE BINDING ON ALL PARTIES ASSOCIATED WITH THE CONTRACT. IN NO WAY SHALL WORD-OF-MOUTH DIALOG CONSTITUTE AN OFFICIAL RESPONSE.
6. PRIOR TO START OF WORK, CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH ALL CONDITIONS OF THE SITE, AND SHALL ACCOUNT FOR CONDITIONS THAT AFFECT, OR MAY AFFECT CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, LIMITATIONS OF WORK ACCESS, SPACE LIMITATIONS, OVERHEAD OBSTRUCTIONS, TRAFFIC PATTERNS, LOCAL REQUIREMENTS, ADJACENT ACTIVITIES, ETC. FAILURE TO CONSIDER SITE CONDITIONS SHALL NOT BE CAUSE FOR CLAIM OF JOB EXTRAS.
7. COMMENCEMENT OF CONSTRUCTION SHALL EXPLICITLY CONFIRM THAT THE CONTRACTOR HAS REVIEWED THE PLANS AND SPECIFICATIONS IN ENTIRETY AND CERTIFIES THAT THEIR SUBMITTED BID PROPOSAL CONTAINS PROVISIONS TO COMPLETE THE PROJECT, WITH THE EXCEPTION OF UNFORESEEN FIELD CONDITIONS; ALL APPLICABLE PERMITS HAVE BEEN OBTAINED; AND CONTRACTOR UNDERSTANDS ALL OF THE REQUIREMENTS OF THE PROJECT.
8. SHOULD ANY DISCREPANCIES OR CONFLICTS IN THE PLANS OR SPECIFICATIONS BE DISCOVERED AFTER THE AWARD OF CONTRACT, ENGINEER SHALL BE NOTIFIED IN WRITING IMMEDIATELY AND CONSTRUCTION OF ITEMS AFFECTED BY THE DISCREPANCIES/CONFLICTS SHALL NOT COMMENCE, OR CONTINUE, UNTIL A WRITTEN RESPONSE FROM ENGINEER/OWNER IS DISTRIBUTED. IN THE EVENT OF A CONFLICT BETWEEN REFERENCED CODES, STANDARDS, SPECIFICATIONS AND PLANS, THE ONE ESTABLISHING THE MOST STRINGENT REQUIREMENTS SHALL BE FOLLOWED.
9. THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS AND LICENSES TO COMPLETE THE PROJECT, OBTAINING PERMITS, OR DELAYS, IS NOT CAUSE FOR DELAY OF THE CONTRACT OR SCHEDULE. CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS.
10. THE CONTRACTOR SHALL NOTIFY ALL INTERESTED GOVERNING AGENCIES, UTILITY COMPANIES AFFECTED BY THIS CONSTRUCTION PROJECT, AND DIGGER'S HOTLINE IN ADVANCE OF CONSTRUCTION TO COMPLY WITH ALL JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., PERMIT STIPULATIONS, AND OTHER APPLICABLE STANDARDS.
11. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO INITIATE, INSTITUTE, ENFORCE, MAINTAIN, AND SUPERVISE ALL SAFETY PRECAUTIONS AND JOB SITE SAFETY PROGRAMS IN CONNECTION WITH THE WORK.
12. CONTRACTOR SHALL KEEP THE JOBSITE CLEAN AND ORDERLY AT ALL TIMES. ALL LOCATIONS OF THE SITE SHALL BE KEPT IN A WORKING MANNER SUCH THAT DEBRIS IS REMOVED CONTINUOUSLY AND ALL RESPECTIVE CONTRACTORS OPERATE UNDER GENERAL "GOOD HOUSEKEEPING."
13. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, ENGINEER, AND THEIR AGENTS FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.
14. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING MUST BE HELD AT THE VILLAGE OFFICES. THE PRECONSTRUCTION MEETING SHALL BE SCHEDULED AND MODERATED BY THE DESIGN ENGINEER OF RECORD.

DIGGERS HOTLINE
Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
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EXPIRATION DATE: JULY 31, 2018

REVIEWED: FS
DESIGNED: JRN
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CHICAGO | MILWAUKEE : NATIONWIDE

LINDEN GROVE
WAUKESHA, WI

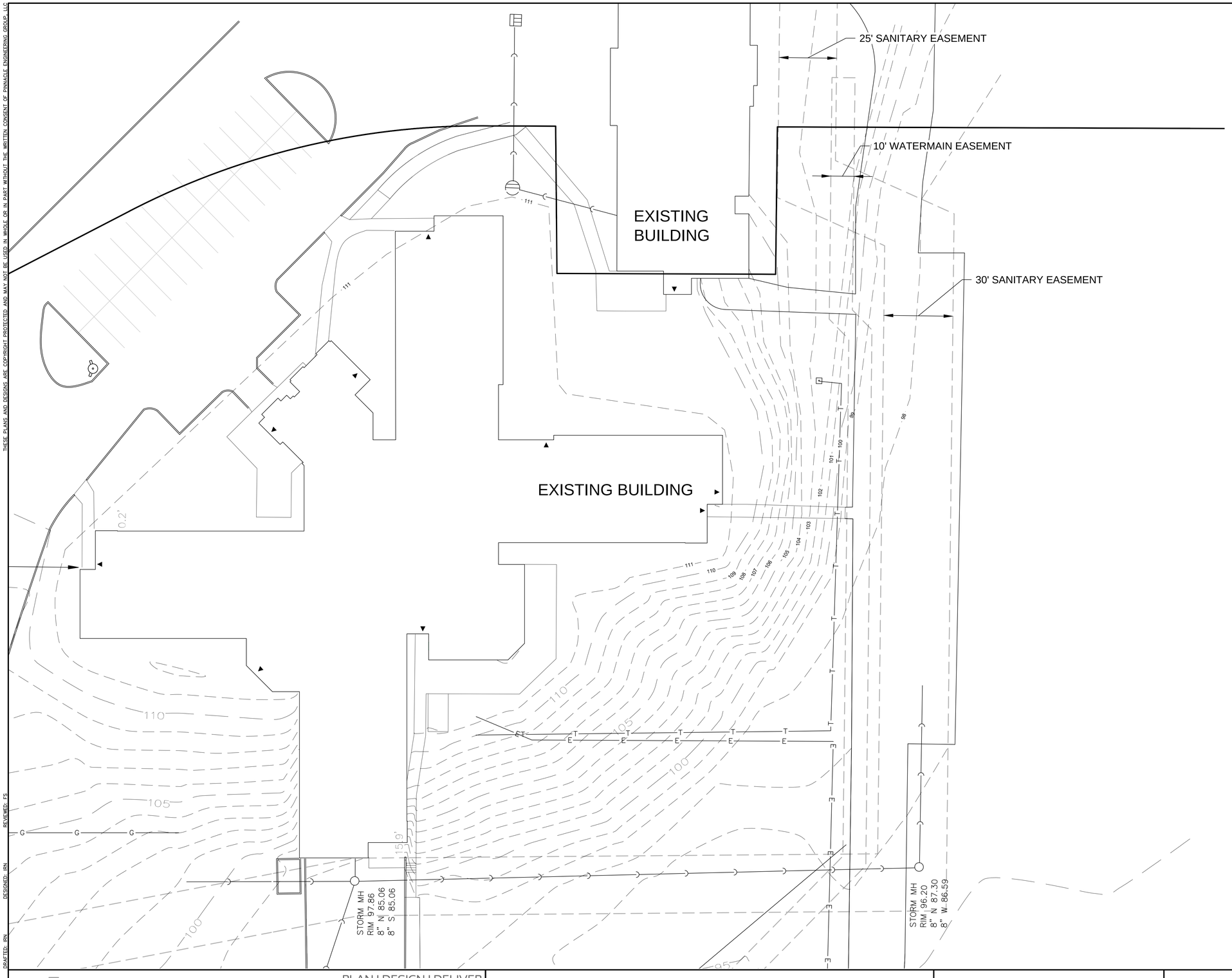
COVER SHEET

REVISIONS

PEG JOB No. 653.00
PEG PM FS
START DATE 12-19-16
SCALE

SHEET
C-1
C-5

FOR REVIEW
COVER SHEET



GENERAL SPECIFICATIONS FOR CONSTRUCTION ACTIVITIES

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE WISCONSIN D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION, THE STANDARD SPECIFICATIONS FOR SEWER & WATER IN WISCONSIN, AND WISCONSIN ADMINISTRATIVE CODE, SPS 360, 382-383, AND THE LOCAL ORDINANCES AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR EXECUTION OF THE WORK. THE CONTRACTOR SHALL CONDUCT HIS WORK ACCORDING TO THE REQUIREMENTS OF THE PERMITS.
3. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE MUNICIPALITY FORTY- EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION.
4. THE MUNICIPALITY SHALL HAVE THE RIGHT TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION OF THE PUBLIC PORTIONS OF THE WORK. THE OWNER SHALL HAVE THE RIGHT TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION OF ALL PRIVATE PORTIONS OF THE WORK.
5. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC, FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.
6. SITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY INFORMATION SHOWN ON THE PLANS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL DIGGER'S HOTLINE AT 1-800-242-8511 TO NOTIFY THE UTILITIES OF HIS INTENTIONS, AND TO REQUEST FIELD STAKING OF EXISTING UTILITIES.
8. SILT FENCE AND OTHER EROSION CONTROL FACILITIES MUST BE INSTALLED PRIOR TO CONSTRUCTION OR ANY OTHER LAND DISTURBING ACTIVITY. FOLLOW THE SEQUENCE OF CONSTRUCTION ON THE EROSION CONTROL PLAN FOR MORE DETAILS. INSPECTIONS SHALL BE MADE WEEKLY OR AFTER EVERY RAINFALL OF 0.5" OR MORE. REPAIRS SHALL BE MADE IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EROSION CONTROL FACILITIES ONCE THE THREAT OF EROSION HAS PASSED WITH THE APPROVAL OF THE GOVERNING AGENCY.
9. ANY ADJACENT PROPERTIES OR ROAD RIGHT-OF-WAYS WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED BY THE CONTRACTOR.
10. TRASH AND DEBRIS SHALL BE NOT BE ALLOWED TO ACCUMULATE ON THIS SITE AND THE SITE SHALL BE CLEAN UPON COMPLETION OF WORK.
11. THE OWNER SHALL HAVE THE RIGHT TO HAVE ALL MATERIALS USED IN CONSTRUCTION TESTED FOR COMPLIANCE WITH THESE SPECIFICATIONS.

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 20' 40'

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EXISTING CONDITIONS

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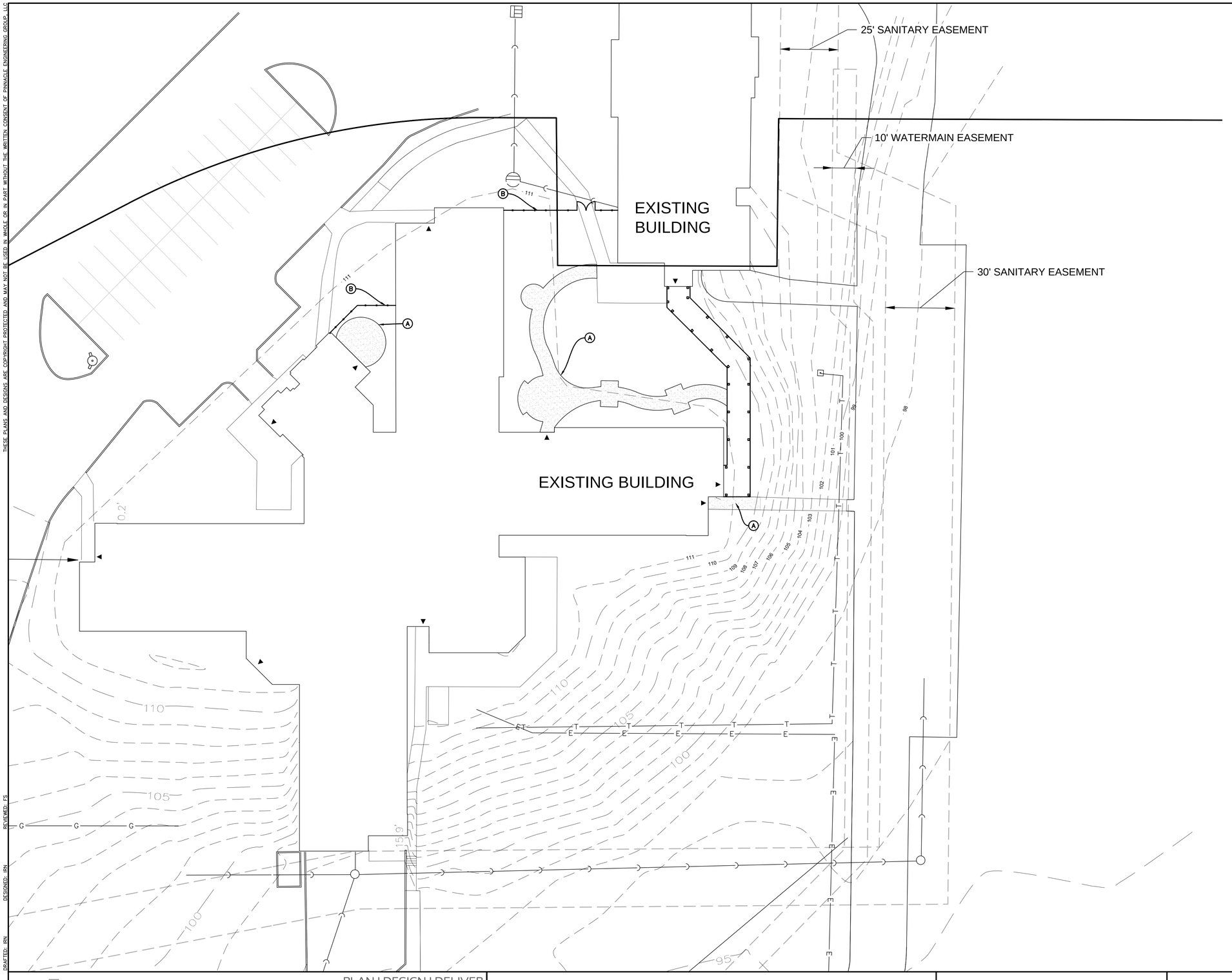
C-2
C-5



LEGEND

- **CONCRETE SIDEWALK**
  - 6" CRUSHED AGGREGATE BASE COURSE (1-1/2" DENSE GRADED LIMESTONE)
  - 5" PCC (6x6 WELDED WIRE FABRIC PER RACI 315-92)
- (A) **PROPOSED SIDEWALK**
- (B) **PROPOSED FENCE**
- (C) **PROPOSED LIGHTING (TYP)**
- **MAN DOOR**
- O.H.D. **OVERHEAD DOOR**

SPECIFICATIONS FOR PAVING

1. AGGREGATES USED IN THE CRUSHED STONE BASE SHALL CONFORM TO THE GRADATION REQUIREMENTS SECTIONS 301.2 AND 305.2.2 OF THE STANDARD SPECIFICATIONS. THICKNESS SHALL BE PER THE DETAIL ON THE PLANS. BASE SHALL BE 1½ INCH DIAMETER UNLESS NOTED OTHERWISE. RECYCLED MATERIALS MAY BE ALLOWED WITH APPROVAL FROM THE OWNER.
2. SUBGRADE SHALL BE PROOFROLLED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF STONE BASE. EXCAVATE UNSUITABLE AREAS AND REPLACE WITH BREAKER RUN STONE AND RECOMPACT. REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL SPECIFICATIONS.
3. EXISTING PAVEMENT SHALL BE SAWCUT IN NEAT STRAIGHT LINES TO FULL DEPTH AT ANY POINT WHERE EXISTING PAVEMENT IS REMOVED. CURB AND WALK SHALL BE REMOVED TO THE NEAREST JOINT. REMOVED PAVEMENT SHALL BE REPLACED WITH THE SAME SECTION AS EXISTING. MUNICIPAL STANDARDS MAY REQUIRE ADDITIONAL WORK.
4. ASPHALT FOR PARKING AREAS AND THE PRIVATE ROAD SHALL BE PER THE DETAILS MATERIALS AND PLACEMENT SHALL CONFORM TO THE DOT STANDARD SPECIFICATIONS, SECTION 450 AND 460 TYPE E-0.3 IS REQUIRED UNLESS NOTED OTHERWISE. A COMMERCIAL GRADE MIX MAY BE SUBSTITUTED ONLY WITH APPROVAL FROM THE OWNER.
5. CONCRETE FOR CURB, DRIVEWAY, WALKS AND NON-FLOOR SLABS SHALL CONFORM TO SECTION 415 OF THE STANDARD SPECIFICATIONS , GRADE A, ASTM C-94, 6 BAG MIX, WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI. JOINTING SHALL BE PER SECTION 415.3.7 OF THE STANDARD SPECIFICATIONS WITH CONSTRUCTION JOINTS HAVING A MAXIMUM SPACING OF 10'. EXPANSION JOINTS SHALL BE PROVIDED EVERY 50'. CONCRETE SHALL BE FINISHED PER SECTION 415.3.8 WITH A MEDIUM BROOM TEXTURE. A CURING MEMBRANE IN CONFORMANCE WITH SECTION 415.3.12 IS REQUIRED.

NORTH

GRAPHICAL SCALE (FEET)

0 — 1" = 20' — 40'

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SITE PLAN

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PEG JOB No. 653.00
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START DATE 12-19-16
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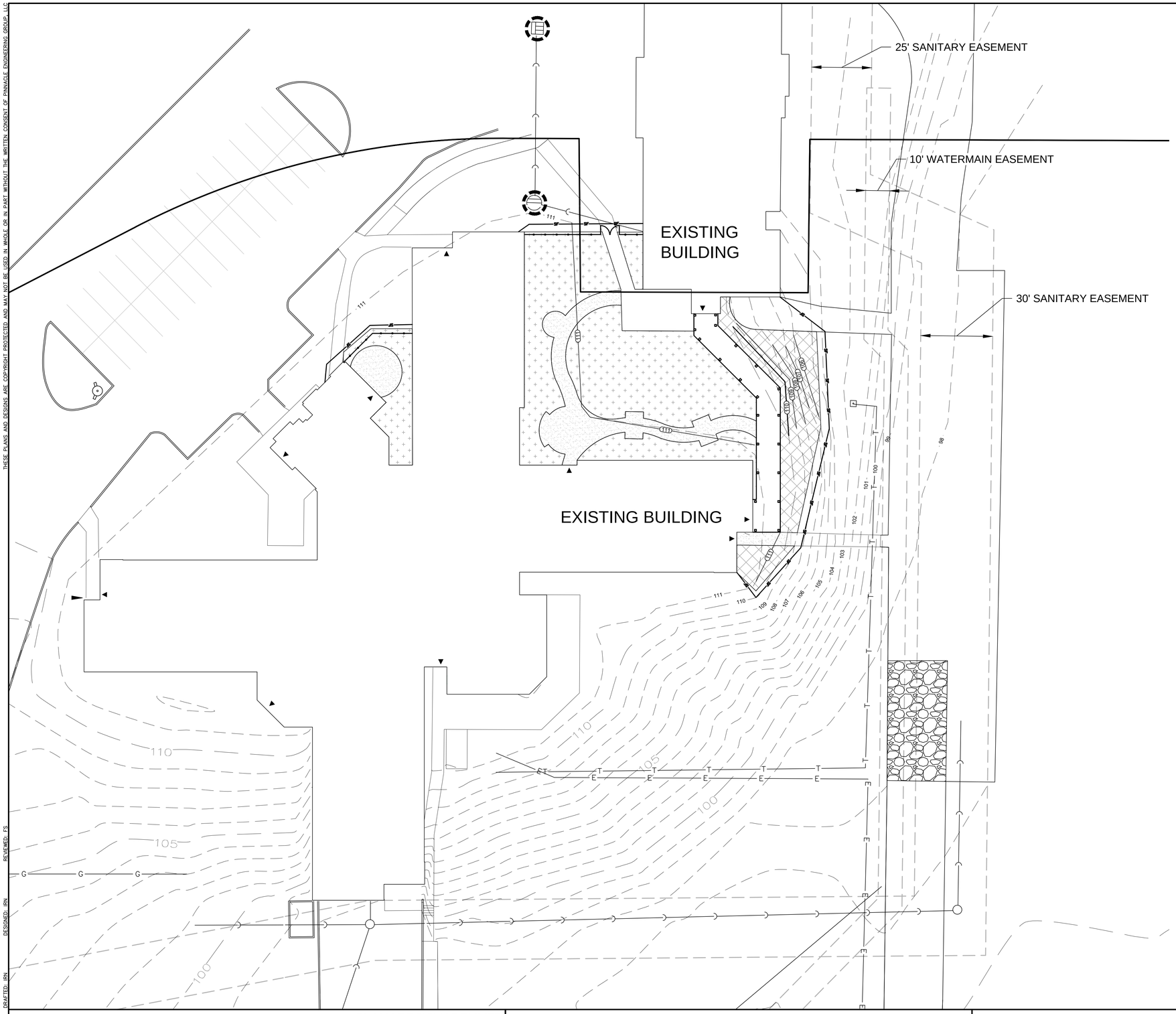
C-3
C-5

FOR REVIEW

SITE PLAN



LEGEND

SANITARY SEWER MANHOLE	NORMAL WATER LEVEL (NWL)
STORM SEWER MANHOLE	DIRECTION OF SURFACE FLOW (GRADE / PAVEMENT)
STORM STORM CATCH BASIN (ROUND CASTING)	DITCH OR SWALE
STORM SEWER CATCH BASIN (RECTANGULAR CASTING)	DIVERSION SWALE
PRECAST FLARED END SECTION	OVERFLOW RELIEF ROUTING
CLEANOUT	SILT FENCE (SF)
VALVE BOX	INLET PROTECTION
FIRE HYDRANT	CONSTRUCTION ENTRANCE
PROPOSED CONTOUR (111)	HYDROSEED (PER MANUFACTURER SPECIFICATIONS)
PROPOSED SPOT ELEVATION (750.0)	EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S75 OR EQUAL)
WETLANDS	
FLOODPLAIN	
HIGH WATER LEVEL (HWL)	

SPECIFICATIONS FOR GRADING & EROSION CONTROL

1. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATIONS OF ALL GRADING AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT. CONTRACTOR SHALL NOTIFY OWNER OF THE NEED TO IMPORT OR HAUL OFF SOIL. ON-SITE LOCATIONS SUITABLE FOR BORROW OR FILL MAY BE PRESENT. COORDINATE WITH OWNER.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT MAY BE AVAILABLE FROM THE OWNER.
3. SITE SHALL BE CLEARED TO THE LIMITS SHOWN ON THE PLANS. REMOVE VEGETATION FROM THE SITE. BURNING IS NOT PERMITTED. PROTECT TREES AND OTHER FEATURES FROM DAMAGE WITH FENCING. STOCKPILES SHALL NOT BE LOCATED CLOSER THAN 25' TO A DRAINAGE STRUCTURE OR FEATURE AND SHALL BE SURROUNDED WITH SILT FENCE.
4. THE GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR VERIFYING COMPACTION AND FILL PLACEMENT IN THE FIELD. THE GEOTECHNICAL ENGINEER MAY SUPERCEDE THESE SPECIFICATIONS IF THERE IS GOOD CAUSE TO DO SO. AN EXPLANATION MUST BE SUBMITTED TO THE ENGINEER IN WITTING BEFORE ANY DEVIATIONS ARE MADE.
5. IF NO GEOTECHNICAL RECOMMENDATION IS AVAILABLE, THEN THE FOLLOWING SPECIFICATIONS SHALL APPLY. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL AND SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING: THE COMPACTED FILL SUBGRADE SHALL CONSIST OF AND SHALL BE UNDERLAIN BY SUITABLE BEARING MATERIALS, FREE OF ALL ORGANIC, FROZEN OR OTHER DELETERIOUS MATERIAL AND INSPECTED AND APPROVED BY THE RESIDENT GEOTECHNICAL ENGINEER. PREPARATION OF THE SUBGRADE, AFTER STRIPPING, SHALL CONSIST OF PROOF-ROLLING TO DETECT UNSTABLE AREAS THAT MIGHT BE UNDERCUT, AND COMPACTING THE SCARIFIED SURFACE TO THE SAME MINIMUM DENSITY INDICATED BELOW. THE COMPACTED FILL MATERIALS SHALL BE FREE OF ANY DELETERIOUS, ORGANIC OR FROZEN MATTER AND SHALL HAVE A MAXIMUM LIQUID LIMIT (ASTM-D-423) AND PLASTICITY INDEX (ASTM D-424) IF 30 AND 10 RESPECTFULLY, UNLESS SPECIFICALLY TESTED AND FOUND TO HAVE LOW EXPANSIVE PROPERTIES AND APPROVED BY AN EXPERIENCED SOILS ENGINEER. THE TOP TWELVE (12") INCHES OF COMPACTED FILL SHOULD HAVE A MAXIMUM THREE (3") INCH PARTICLE DIAMETER AND ALL UNDERLYING COMPACTED FILL A MAXIMUM SIX (6") INCH PARTICLE DIAMETER UNLESS SPECIFICALLY APPROVED BY AN EXPERIENCED SOILS ENGINEER. ALL FILL MATERIAL MUST BE TESTED AND APPROVED UNDER THE DIRECTION AND SUPERVISION OF AN EXPERIENCED SOILS ENGINEER PRIOR TO PLACEMENT, IF THE FILL IS TO PROVIDE NON-FROST SUSCEPTIBLE CHARACTERISTICS, IT MUST BE CLASSIFIED AS A CLEAN GW, GP, SW, OR SP PER UNITED SOIL CLASSIFICATION SYSTEM (ASTM D-2487). FOR STRUCTURAL FILL THE DENSITY OF THE STRUCTURAL COMPACTED FILL AND SCARIFIED SUBGRADE AND GRADES SHALL NOT BE LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR (ASTM D-698) WITH THE EXCEPTION TO THE TOP 12 INCHES OF PAVEMENT SUBGRADE WHICH SHALL A MINIMUM IN-SITU DENSITY OF 100 PERCENT OF THE MAXIMUM DRY DENSITY, OR 5 PERCENT HIGHER THAN UNDERLYING FILL MATERIALS. THE MOISTURE CONTENT OF COHESIVE SOIL SHALL NOT VARY BY MORE THAN -1 TO +3 PERCENT AND GRANULAR SOIL ±3 PERCENT OF OPTIMUM WHEN PLACED AND COMPACTED OR RECOMPACTED, UNLESS SPECIFICALLY APPROVED BY THE SOILS ENGINEER TAKING INTO CONSIDERATION THE TYPE OF MATERIALS AND COMPACTION EQUIPMENT BEING USED. THE COMPACTION EQUIPMENT SHOULD CONSIST OF SUITABLE MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR SOIL COMPACTION. BULLDOZERS OR SIMILAR TRACKED VEHICLES ARE TYPICALLY NOT SUITABLE FOR COMPACTION. MATERIAL THAT IS TOO WET TO PERMIT PROPER COMPACTION MAY BE SPREAD ON THE FILL AND PERMITTED TO DRY. DISCING, HARROWING OR PULVERIZING MAY BE NECESSARY TO REDUCE THE MOISTURE CONTENT TO A SATISFACTORY VALUE, AFTER WHICH IT SHALL BE COMPACTED. THE FINISHED SUBGRADE AREAS OF THE SITE SHALL BE COMPACTED TO 100 PERCENT OF THE STANDARD PROCTOR (ASTM D-398) MAXIMUM DENSITY.
6. NO FILL SHALL BE PLACED ON A WET OR SOFT SUBGRADE. THE SUBGRADE SHALL BE PROOF-ROLLED AND INSPECTED BY THE GEOTECHNICAL ENGINEER BEFORE ANY MATERIAL IS PLACED.
7. SUBGRADE TOLERANCES ARE +/-1" FOR LANDSCAPE AREAS AND +/- ½" FOR ALL PAVEMENT AND BUILDING AREAS.
8. TOPSOIL SHALL BE FREE OF DELETERIOUS MATERIALS, ROOTS, OLD VEGETATION, ROCKS OVER 2" DIAMETER AND SHALL NOT BE EXCESSIVELY CLAYEY IN NATURE. NO CLUMPS LARGER THAN 4" ARE ACCEPTABLE. TOPSOIL MAY BE AMENDED AS NEEDED WITH SAND OR COMPOST TO BE LOOSE WHEN SPREAD.
9. THE CONTRACTOR SHALL MAINTAIN SITE DRAINAGE THROUGHOUT CONSTRUCTION. THIS MAY INCLUDE THE EXCAVATION OF TEMPORARY DITCHES OR PUMPING TO ALLEVIATE WATER PONDING. ANY DEWATERING SHALL NOT GO DIRECTLY TO STREAMS, CREEKS, WETLANDS OR OTHER ENVIRONMENTALLY SENSITIVE AREAS WITHOUT BEING TREATED FIRST. A DIRT BAG OR OTHER DEWATERING TREATMENT DEVICE MAY BE USED TO CAPTURE SEDIMENT FROM THE PUMPED WATER.
10. CONTRACTOR IS ADVISED THAT ALL MUD AND DEBRIS MUST NOT BE DEPOSITED ONTO THE ADJACENT ROADWAYS PER THE REQUIREMENT OF THE MUNICIPALITY OR OTHER APPROPRIATE GOVERNMENT AGENCIES. IN THE EVENT THIS OCCURS, THE ROADWAYS SHALL BE POWER SWEPT IMMEDIATELY AND ALL SEDIMENT REMOVED FROM DOWNSTREAM FACILITIES.
11. MATTING SHALL BE AS FOLLOWS:
    - NON-CHANNEL EROSION MAT
        - CLASS I: SHORT TERM DURATION (MINIMUM OF 6 MONTHS)
            1. TYPE A: USE ON ERODIBLE SLOPES 2.5:1 OR FLATTER
            2. TYPE B: DOUBLE NETTED PRODUCT ON ERODIBLE SLOPES 2:1 OR FLATTER
        - CLASS I, URBAN: SHORT TERM DURATION (MIN. OF 6 MONTHS), LIGHT DUTY, ORGANIC EROSION CONTROL MAT FOR AREAS WHERE MOWING MAYBE ACCOMPLISHED WITHIN TOW WEEKS AFTER INSTALLATION
            1. URBAN, TYPE A: USE ON ERODIBLE SOULS WITH SLOPES 4:1 OR FLATTER
            2. URBAN, TYPE B: DOUBLE NETTED PRODUCT FOR USE ON SLOPES 2.5:1 OR FLATTER
        - CLASS II: LONG TERM DURATION (3 YEARS OR GREATER), ORGANIC EROSIONAL CONTROL REVEGETATIVE MAT
            1. TYPE A: JUSTE FIBER ONLY FOR USE ON SLOPES 2:1 OR FLATTER FOR SOD REINFORCEMENT
            2. TYPE B: FOR USE ON SLOPES 2:1 OR GREATER MADE WITH PLASTIC OR BIODEGRADABLE NET
            3. TYPE C: A WOVEN MAT OF 100% ORGANIC FIBERS FOR USE ON SLOPES 2:1 OR FLATTER AND IN ENVIORNMENTALLY AND BIOLOGICALLY SENSITIVE AREAS WHERE PLASTIC NETTING IS INAPPROPRIATE
        - CLASS III: PERMANENT 100% SYNTHETIC ECRM OR TRM, EITHER A SOIL STABILIZER TYPE A OR CLASS I, TYPE A OR B EROSION MAT MUST BE PLACED OVER THE SOIL FILLED TRM
            1. TYPE A: ECRM FOR USE ON SLOPES 2:1 OR FLATTER
            2. TYPE B OR C: TRM FOR USE ON SLOPES 2:1 OR FLATTER
            3. TYPE D: TRM FOR USE ON SLOPES 1:1 OR FLATTER

    - CHANNEL EROSION MAT
        - CLASS I: SHORT TERM DURATION (MINIMUM OF 6 MONTHS), LIGHT DUTY, ORGANIC ECRM WITH PLASTIC OR BIODEGRADABLE NETTING
            1. TYPE A: ONLY SUITABLE FOR SLOPE APPLICATIONS, NOT CHANNEL APPLICATIONS
            2 TYPE B: DOUBLE NETTED PRODUCT FOR USE IN CHANNELS WHERE THE CALCULATED (DESIGN) SHEAR STREES IS 1.5 LBS/FT² OR LESS
        - CLASS II: LONG TERM DURATION (3 YEARS OR GREATER), ORGANIC ECRM
            1. TYPE A: JUTE FIBER ONLY FOR USE IN CHANNELS TO REINFORCE SOD
            2. TYPE B: FOR USE IN CHANNELS WHERE THE CALCULATED (DESIGN) SHEAR STRESS IS 2.0LBS/FT² OR LESS. MADE WITH PLASTIC OR BIODEGRADABLE MAT
            3. TYPE C: WOVEN MAT OF 100% ORGANIC MATERIAL FOR USE IN CHANNELS WHERE THE CALCULATED (DESIGN) SHEAR STRESS IS 2.0LBS/FT² OR LESS, APPLICABLE FOR USE IN ENVIRONMENTALLY SENSITIVE AREAS WHERE PLASTIC NETTING IS INAPPROPRIATE
        - CLASS III: PERMANENT 100% SYNTHETIC ECRM OR TRM, CLASS I, TYPE B EROSION MAT OR CLASS II, TYPE B OR C EROSION MAT MUST BE PLACED OVER A SOIL FILLED TRM
            1. TYPE A: ECRM FOR USE IN CHANNELS WHERE THE CALCULATED (DESIGN) SHEAR STRESS OF 2.0LB/FT² OR LESS
            2. TYPE B: TRM FOR USE IN CHANNELS WHERE THE CALCULATED (DESIGN) SHEAR STRESS OF 2.0LBS/FT² OR LESS.
            3. TYPE C: TRM FOR USE IN CHANNELS WHERE THE CALCULATED (DESIGN) SHEAR STRESS OF 3.5LBS/FT² OR LESS
            4. TYPE D: TRM FOR USE IN CHANNELS WHERE THE CALCULATED (DESIGN) SHEAR STRESS OF 5.0LBS/FT² OR LESS

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 20' 40'

REVIEWED: FS
DESIGNED: IRN
DRAFTED: IRN

PLAN I DESIGN I DELIVER
www.pinnacle-engr.com
PINNACLE ENGINEERING GROUP
ENGINEERING I NATURAL RESOURCES I SURVEYING
WISCONSIN OFFICE:
15850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888
CHICAGO I MILWAUKEE : NATIONWIDE

LINDEN GROVE
WAUKESHA, WI

GRADING & EROSION CONTROL PLAN

REVISIONS

PEG JOB No. 653.00
PEG PM FS
START DATE 12-19-16
SCALE

SHEET
C-4
C-5

FOR REVIEW

GRADING & EROSION CONTROL PLAN

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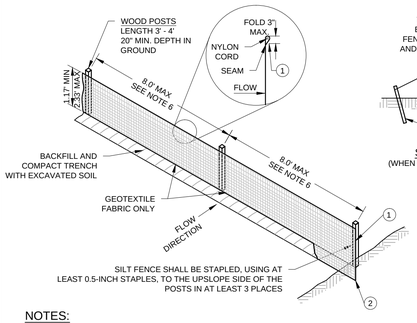
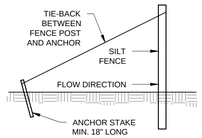
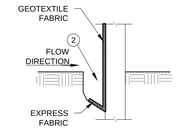


NOTES:

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS I WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
2. SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8-INCHES OF FABRIC IN A 4-INCH WIDE AND 6-INCH DEEP TRENCH OR 6-INCH DEEP V-TRENCH ON THE UPSLOPE SIDE OF THE FENCE. TRENCHES SHALL NOT BE EXCAVATED WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION.
3. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
4. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1.125-INCHES x 1.125-INCHES OF DRIED OAK OR HICKORY.
5. SILT FENCE TO EXTEND ABOVE THE TOP OF PIPE, WHERE APPLICABLE.
6. POST SPACING SHALL BE SELECTED BASED ON GEOTEXTILE FABRIC (8-FEET FOR WOVEN AND 3-FEET FOR NON-WOVEN).

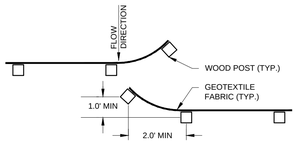


SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)

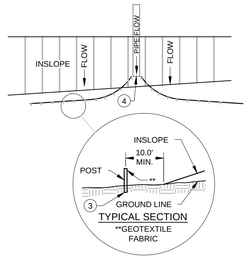


NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

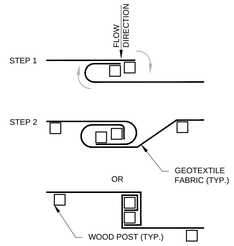
TRENCH DETAIL



JOINT (HOOK METHOD)



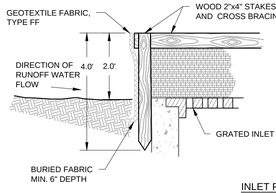
SILT FENCE ALONG SLOPES & OUTFALLS



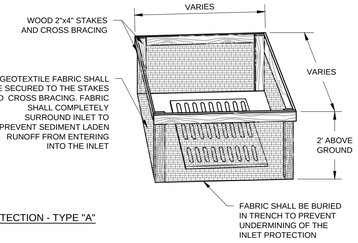
JOINT (TWIST METHOD)

SILT FENCE

#100-A 10-02-12



INLET PROTECTION - TYPE "A"



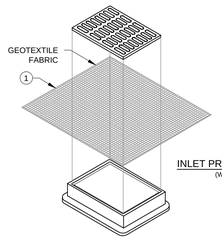
NOTES:

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, WITH AN EOS OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
2. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

(1) FINISHED SIZE, INCLUDING FLAP POCKET WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

(2) FOR INLET PROTECTION, TYPE "C" (WITH CURB BOX), AN ADDITIONAL 18 INCHES OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

(3) FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2x4.

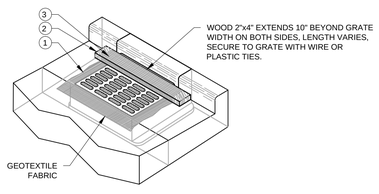


INLET PROTECTION - TYPE "B"
(WITHOUT CURB BOX)

TYPE "B" & "C" INSTALLATION NOTES

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3 INCHES OF THE GRATE.

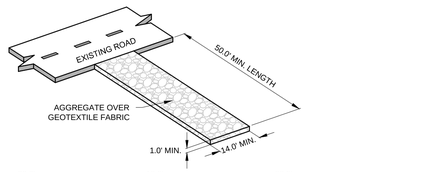
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHODS TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.



INLET PROTECTION, TYPE "C"
(WITH CURB BOX)

INLET PROTECTION

#104 04-24-13



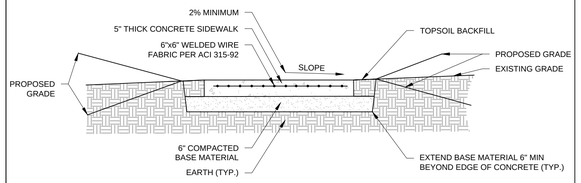
PROFILE VIEW

NOTES:

1. ALL TRACKING PAD MATERIALS AND INSTALLATION SHALL BE IN CONFORMANCE WITH WI DNR TECHNICAL STANDARD 1057.
2. TRACKING PADS SHALL BE INSTALLED PRIOR TO ANY TRAFFIC LEAVING THE SITE. CONTRACTOR SHALL VERIFY LOCATION WITH OWNER.
3. THE AGGREGATE FOR TRACKING PADS SHALL BE 3 TO 6 INCH CLEAR OR WASHED STONE. ALL MATERIALS TO BE RETAINED ON A 3-INCH SIEVE
4. THE AGGREGATE SHALL BE PLACED IN A LAYER AT LEAST 12-INCHES THICK. ON SITES WHERE SATURATED CONDITIONS ARE EXPECTED DURING THE LIFE OF THE PAD, THE PAD SHALL BE UNDERLAIN WITH GEOTEXTILE FABRIC WHICH MEETS MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS I, II OR IV, TO PREVENT MIGRATION OF UNDERLYING SOILS INTO THE STONE LAYER.
5. THE TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT. MINIMUM WIDTH IS 14 FEET FOR ONE-WAY TRAFFIC AND 20 FEET FOR TWO-WAY TRAFFIC, WITH AN ADDITIONAL INCREASE OF 4 FEET FOR TRAILER TRAFFIC. THE TRACKING PAD SHALL BE A MINIMUM 50-FEET LONG.
6. ANY SEDIMENT TRACKED ONTO A PUBLIC OR PRIVATE ROAD SHOULD BE REMOVED BY STREET CLEANING, NOT FLUSHING, AT THE END OF EACH WORKING DAY.
7. TRACKING PADS SHALL, AT A MINIMUM, BE INSPECTED WEEKLY AND WITHIN 24-HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 0.5-INCHES OF RAIN OR MORE DURING A 24-HOUR PERIOD.
8. THE TRACKING PAD PERFORMANCE SHALL BE MAINTAINED BY SCRAPING OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.

CONSTRUCTION ENTRANCE

#107-WI 10-02-12



CONCRETE SIDEWALK

#507 10-11-12

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CONSTRUCTION DETAIL

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PEG JOB No. 653.00
PEG PM FS
START DATE 12-19-16
SCALE

SHEET
C-5
C-5

FOR REVIEW

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DESIGNED: IRN
REVIEWED: FS