# ROGERS HOUSE CONSTRUCTED RUIN

MERCER COUNTY, MERCER COUNTY PARK

M+Sa PROJECT NO.: 1507

CONSTRUCTION DOCUMENTS - OCTOBER 1, 2017



## **ABBREVIATIONS**

AFF	ABOVE FINISH FLOOR	FLR	FLOOR(ING)	PVMT	PAVEMENT
AP	ACCESS PANEL	FD	FLOOR DRAIN	PLAM	PLASTIC LAMINATE
ACT	ACOUSTICAL CEILING TILE	FM	FLOOR MAT & FRAME	PLYWD	PLYWOOD
A/C	AIR CONDITIONING	FT	FEET	PVC	POLYVINYL CHLORIDE
ALT	ALTERNATE	FTG	FOOTING	PSI	POUNDS PER SQUARE
ALUM	ALUMINUM	FR	FRAME(ED), (ING)		INCH
AB	ANCHOR BOLT	FBO	FURNISHED BY OTHERS	PSF	POUNDS PER SQUARE
ARCH	ARCHITECT(URAL)	FURR	FURRED (ING)	FOOT	A many many of a many many of the first and many many many many of the first of the
ASPH	ASPHALT			ा सामाना ।	
ASTM	AMERICAN SOCIETY FOR TESTING	GA	GAGE, GAUGE	QTY	QUANTITY
	MATERIALS	GALV	GALVANIZED		
AUX	AUXILARY	GC	GENERAL CONTRACTOR	RAD	RADIUS
		GL	GLASS, GLAZING	REF	REFERENCE
BRG	BEARING	GWB	GYPSUM WALLBOARD	REFR	REFRIGERATOR
BD	BOARD	3000	OIL JOHN MALLOOMED	REINF	REINFORCING
BOT	воттом	HC	HANDICAPPED	REQ	REQUIRE(D)
BLDG	BUILDING	HDR	HEADER	REV	REVISION(S), REVISED
OCC.	DOILDING	HVAC	HEATING/VENTILATION/	R	RISER
CAB	CABINET	TIVAL	AIR-CONDITIONING	RD	ROOF DRAIN
CARP	CARPET	HT	HEIGHT	RM	ROOM
		HM	HOLLOW METAL		ROUGH OPENING
CLG	CEILING	HORIZ	HORIZONTAL	RO	ROOGH OPENING
CTR	CENTER			cee	cremon
Ē	CENTERLINE	HB	HOSE BIB	SEC	SECTION
СТ	CERAMIC TILE	HWH	HOT WATER HEATER	SHT	SHEET
CLR	CLEAR(ANCE)	1896.6	Table to delice if	SIM	SIMILAR
CL	CLOSET	IN	INCH	STC	SOUND TRANSMISSIO
COL	COLUMN	INSUL	INSULATE(D), (ING)	\$	SOUTH
CONC	CONCRETE	INT	INTERIOR	SPEC	SPECIFICATION(S)
CMU	CONCRETE MASONRY UNIT		A No. of the second state	SQ	SQUARE
CONST	CONSTRUCTION	JAN	JANITOR	SF	SQUARE FEET
CONT	CONTINUE/CONTINOUS	JT.	JOINT	SS	STAINLESS STEEL
CI	CONTROL JOINT	IST	JOIST	STD	STANDARD
COORD				STL	STEEL
CORR	CORRIDOR	LAV	LAVATORY	STOR	STORAGE
		LT	LIGHT	STR.	STRUCTURAL
DEMO	DEMOLISH, DEMOLITION			SUSP	SUPSPENDED
DTL	DETAIL	MB	MARKER BOARD		
DIAG	DIAGONAL	MFR	MANUFACTURE(R)	TB	TACKBOARD
DIA	DIAMETER	MO	MASONRY OPENING	THK	THICK(NESS)
DIM	DIMENSION	MAX	MAXIMUM	T&G	TONGUE AND GROOV
DN	DOWN	MECH	MECHANIC(AL)	TOS	TOP OF SLAB
DWR	DRAWER	MIL	METAL	TO STL	TOP OF STEEL
DWG	DRAWING	MIN	MINIMUM	TOW	TOP OF WALL
D	DRAIN	MISC	MISCELLANEOUS	TYP	TYPICAL
		MTD	MOUNTED		
EA	EACH			UL	UNDERWRITERS
E	EAST	NOM	NOMINAL		LABORATORY
ELEC	ELECTRIC(AL)	N	NORTH	UNO	UNLESS OTHERWISE
EWC	ELECTRIC WATER COOLER	N/A	NOT APPLICABLE	4,.4	NOTED
EMER	EMERGENCY	NIC	NOT IN CONTRACT		**************************************
ENCL	ENCLOSE (URE)	NTS	NOT TO SCALE	VERT	VERTICAL
EQ	EQUAL	NO	NUMBER	VIF	VERIFY IN FIELD
EQUIP	EQUIPMENT	NO	NUMIDER		
EXIST	EXISTING	mes	OFFICE	VCT	VINYL COMPOSITE TIL
	EXPANSION JOINT	OFF	OFFICE	1440	William Compression and a service service
E) Evo		OC	ON CENTER(S)	WC	WATER CLOSET
EXP	EXPOSED	OPG	OPENING	WWF	WELDED WIRE FABRIC
EXT	EXTERIOR	OPP	OPPOSITE	W	WEST
****	riving atms.)		4- 4 - 1 - 4444444	W	WIDTH, WIDE
FIN	FINISH(ED)	PTO	PAINTED	W/	WITH
FFL	FINISH FLOOR LEVEL	PVG	PAVE(D), (ING)	W/O	WITHOUT
				WD	WOOD
FE FEC	FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET		S 900 M 1 1 1 7		

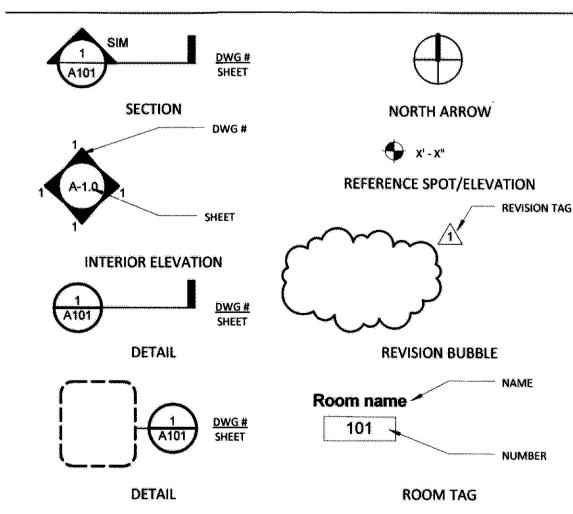
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***************************************	
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## MATERIALS LEGEND

/ <del>/*/</del>		14444 M. 1444	***************************************
	EARTH		WOOD BLOCKING/ FRAMING
	CRUSHED STONE		PLYWOOD
	CONCRETE		WOOD, FINISHED
	CONCRETE MASONRY UNIT		GYPSUM BOARD
	BRICK		GLASS
	STONE		BATT INSULATION
	STEEL		RIGID INSULATION
	WOOD SHIM		

## TYPICAL SYMBOLS



## PROJECT TEAM

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HOUSE
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RUIN

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MERCER COUNTY
MERCER COUNTY PARK

Project No
1507

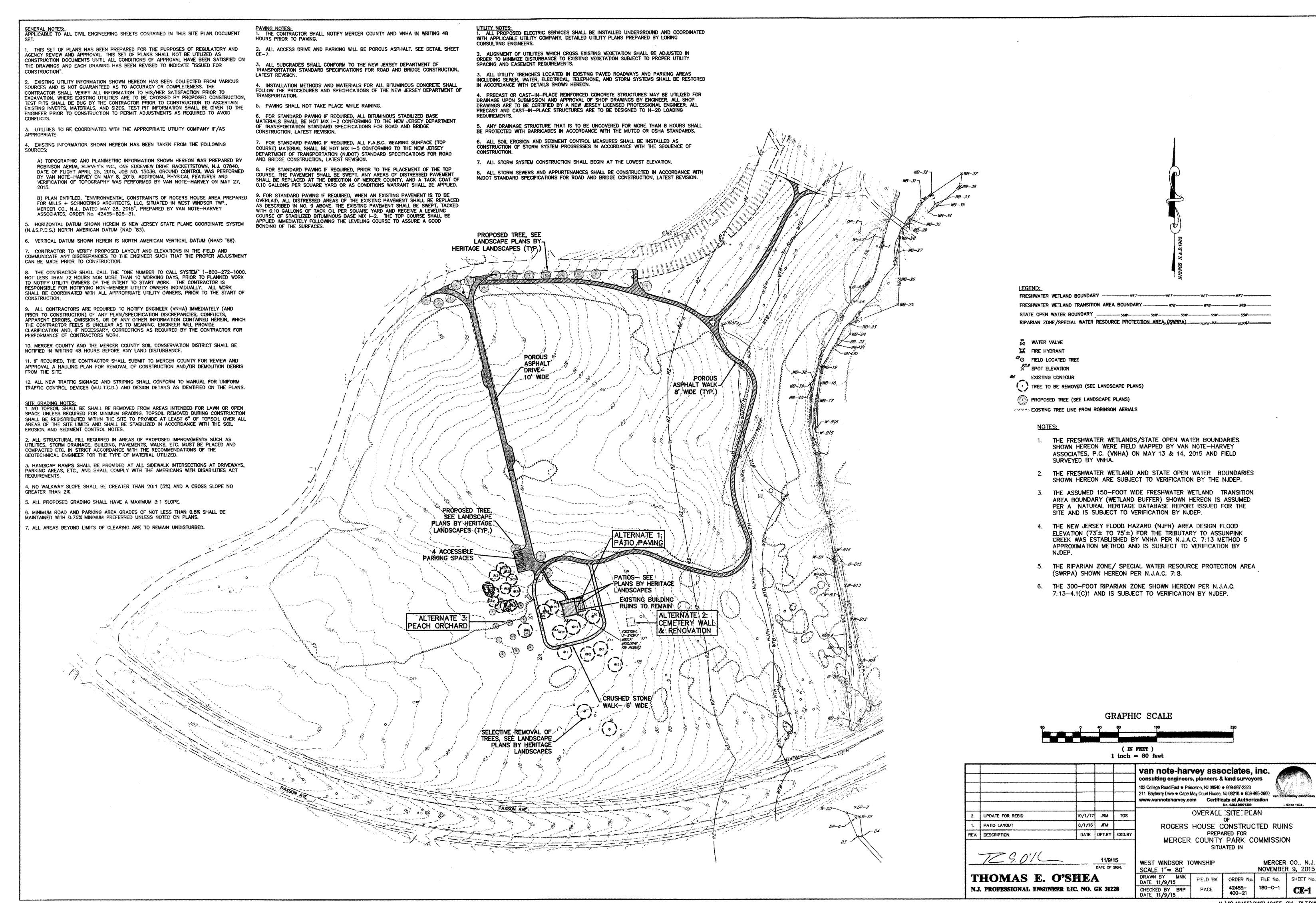
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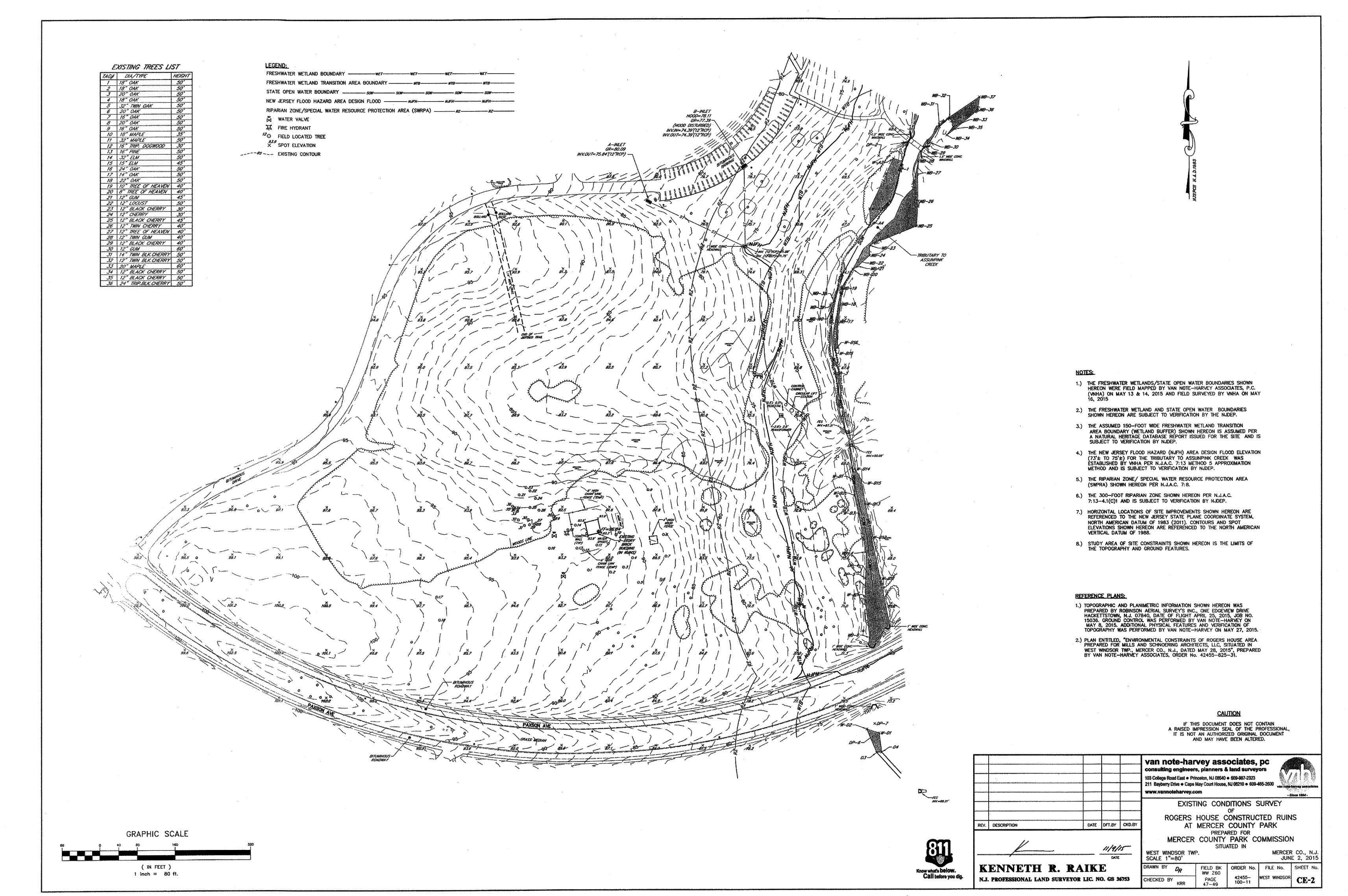
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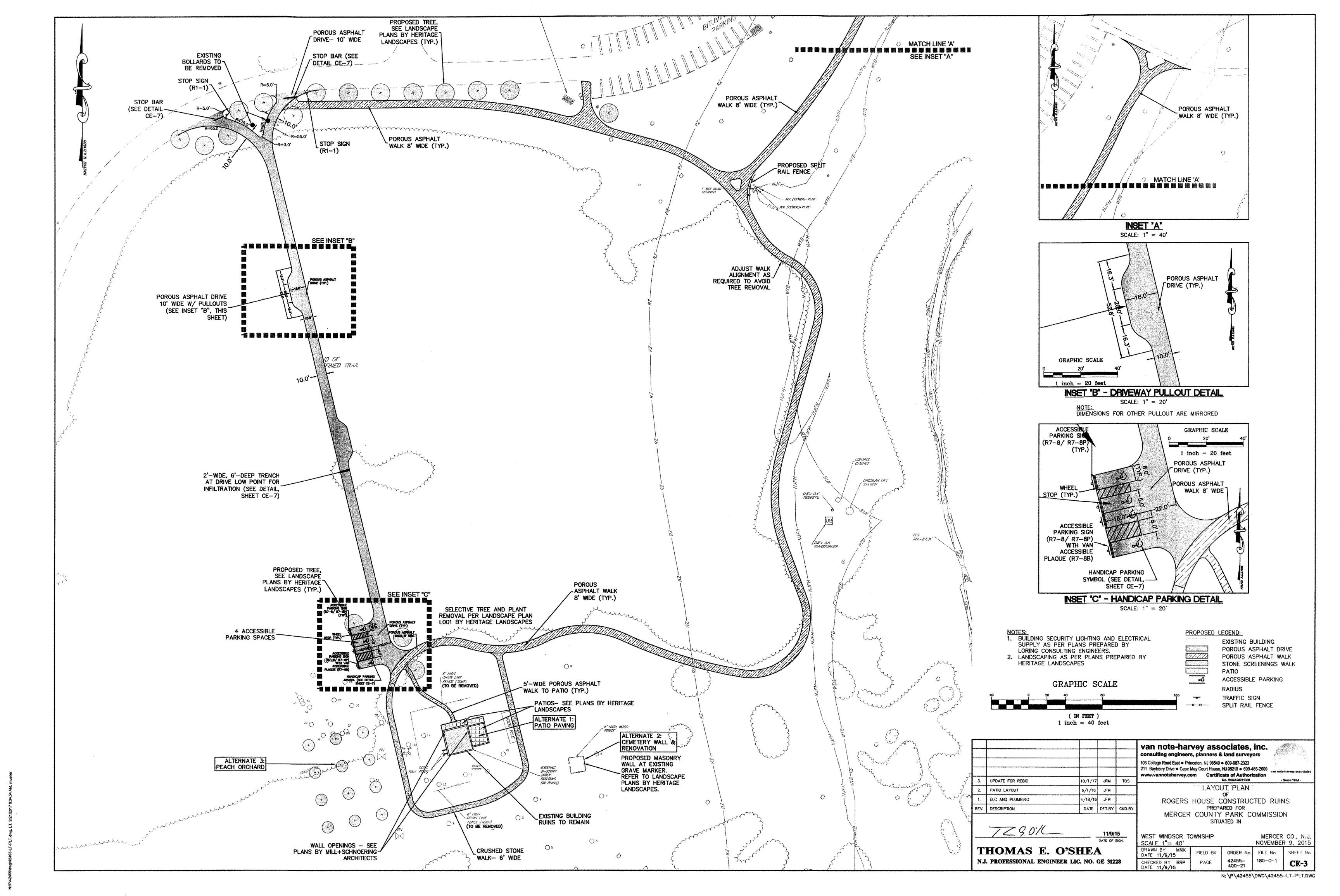
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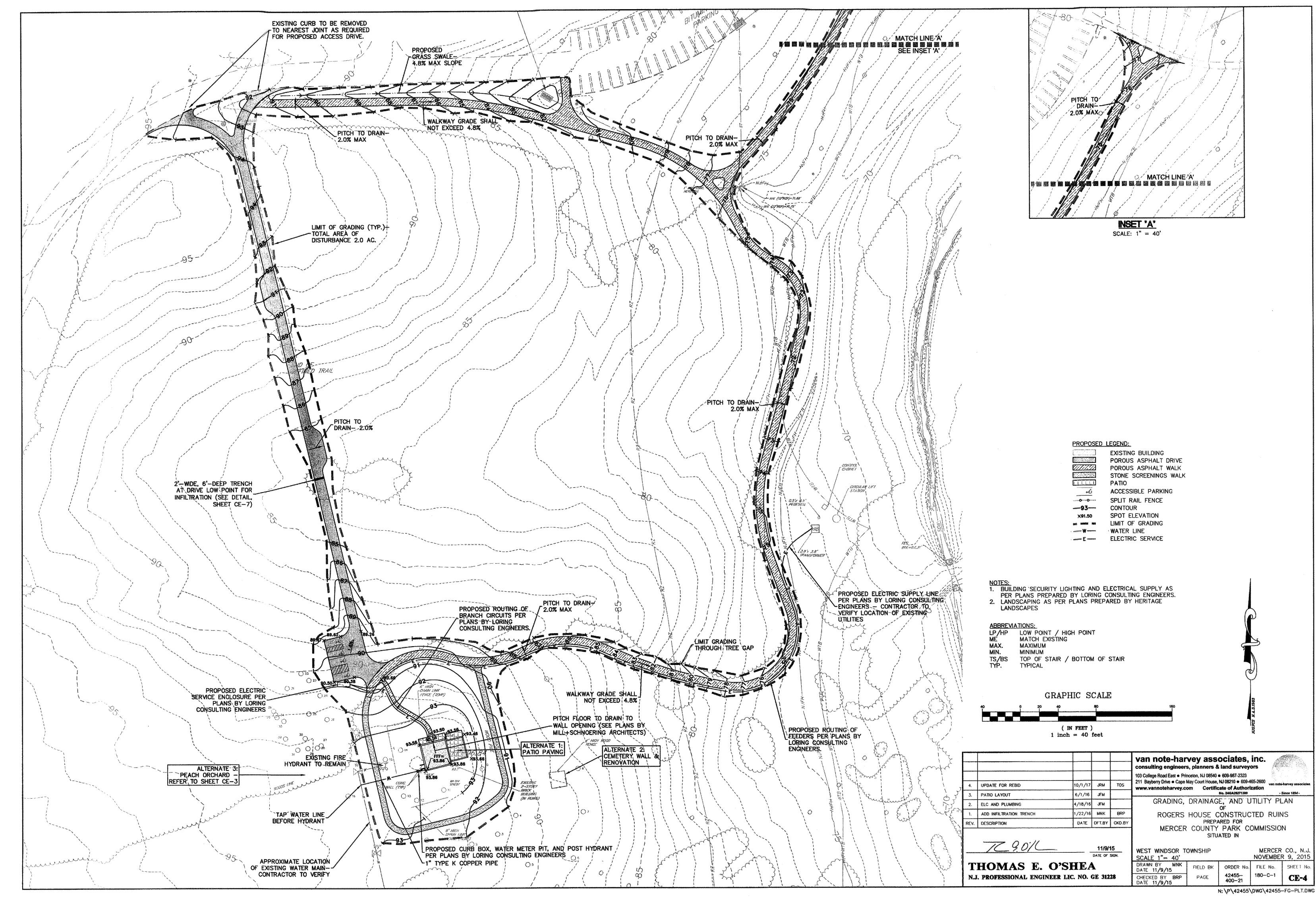
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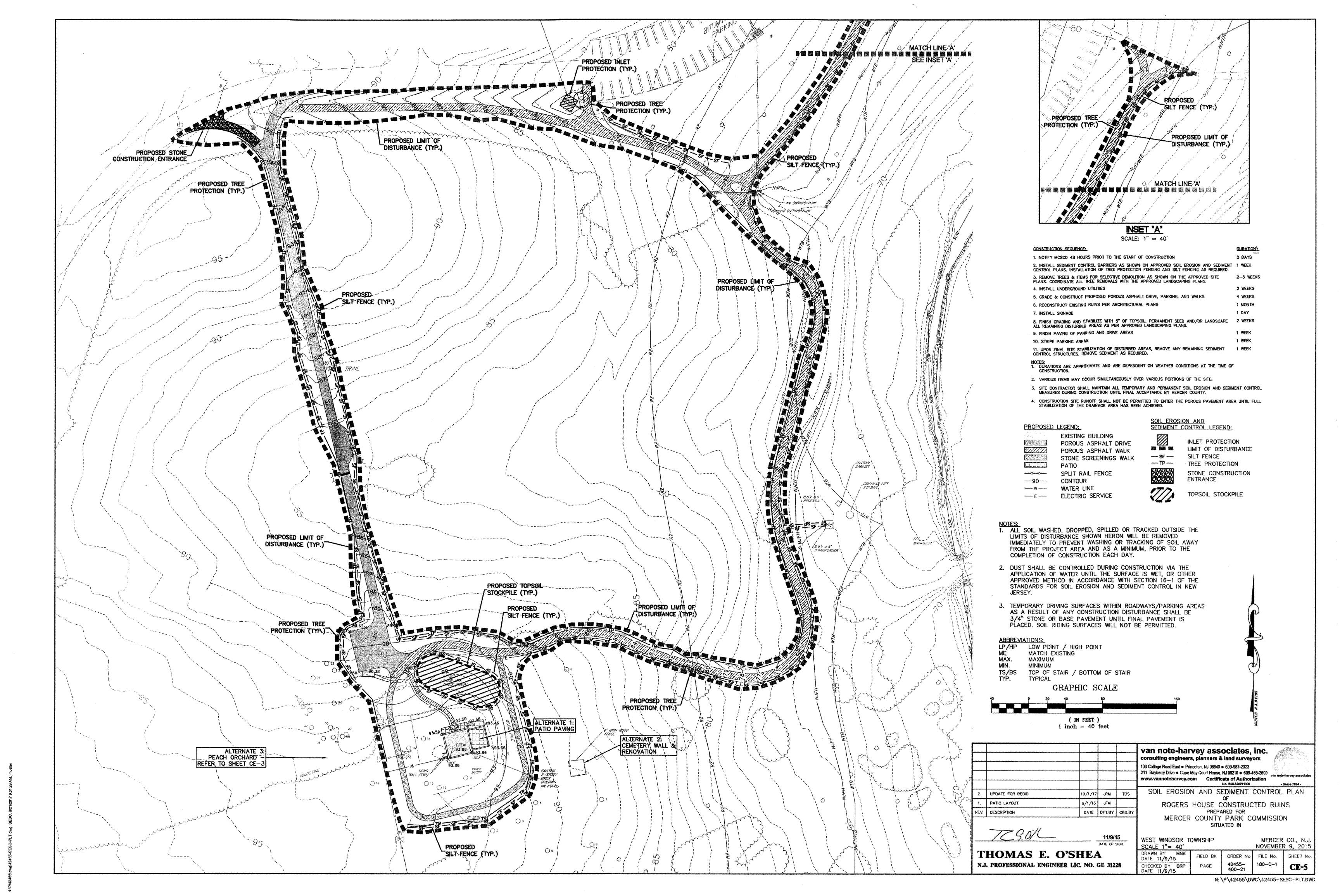


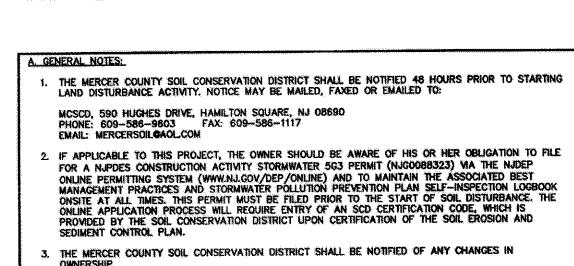


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ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INCLUDING AN INCREASE IN THE LIMIT OF DISTURBANCE, WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RECERTIFICATION. THE REVISED PLANS MUST 5. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON SITE AT ALL TIMES.

5. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AS OUTLINED WITHIN THE SEQUENCE OF CONSTRUCTION ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, AND MAINTAINED

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NJ. IF LANGUAGE CONTAINED WITHIN ANY OTHER PERMIT FOR THIS PROJECT IS MORE RESTRICTIVE THAN (BUT NOT CONTRADICTORY TO) WHAT IS CONTAINED WITHIN THESE NOTES OR ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, THEN THE MORE RESTRICTIVE PERMIT

8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A 11/2" TO I'ME STANDARD FOR STABBLIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A 12 TO 2½" CLEAN STONE TRACKING PAD AT ALL CONSTRUCTION DRIVEWAYS IMMEDIATELY AFTER INITIAL SITE DISTURBANCE, WHETHER IDENTIFIED ON THE CERTIFIED PLAN OR NOT. THE MOTH SHALL SPAN THE FULL WIDTH OF EGRESS, AND LENGTH SHALL BE 50 FT. OR MORE, DEPENDING ON SITE CONDITIONS AND AS REQUIRED BY THE STANDARD. THIS SHALL INCLUDE INDIVIDUAL LOT ACCESS POINTS WITHIN RESIDENTIAL SUBDIVISIONS. IF THE EGRESS IS TO A COUNTY ROAD, THEN A 20FT. LONG PAVED TRANSITION SHALL BE PROVIDED BETWEEN THE EDGE OF PAVEMENT AND THE STONE ACCESS PAD.

9. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS HERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OF PRELIMINARY GRADING, PROVIDED THAT ALL OTHER REQUIREMENTS RELATED TO DETENTION BASINS, SWALES AND THE SEQUENCE OF CONSTRUCTION HAVE BEEN MET.

10. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 14 DAYS AND NOT SUBJECT TO CONSTRUCTION ACTIVITY WILL IMMEDIATELY RECEIVE TEMPORARY STABILIZATION. IF THE SEASON PREVENTS ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER, OR IF THE AREA IS NOT TOPSOILED THEN THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS. SLOPED AREAS IN EXCESS OF 3H: IV SHALL BE PROVIDED WITH EROSION CONTROL BLANKETS. CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES, ROADWAY EMBANKMENTS, ENVIRONMENTALLY SENSITIVE AREAS) WILL RECEIVE TEMPORARY STABILIZATION IMMEDIATELY AFTER INITIAL DISTURBANCE OR ROUGH GRADING.

11. ANY STEEP SLOPES (I.E. SLOPES GREATER THAN 3:1) RECEIVING PIPELINE OR UTILITY INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS.

12. PERMANENT VEGETATION SHALL BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING AND TOPSOILING. ALL AGRONOMIC REQUIREMENTS CONTAINED WITHIN THE STANDARDS AND ON THE CERTIFIED PLAN SHALL BE EMPLOYED. MULCH WITH BINDER, IN ACCORDANCE WITH THE STANDARDS, SHALL BE USED ON ALL SEEDED AREAS. SAVE ALL TAGS AND/OR BAGS USE FOR SEED, LIME AND FERTILIZER, AND PROVIDE THEM TO THE DISTRICT INSPECTOR TO VERIFY THAT

AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER, IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, THEN NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

14. DURING THE COURSE OF CONSTRUCTION, SOIL COMPACTION MAY OCCUR WITHIN HAUL ROUTES, STAGING AREAS AND OTHER PROJECT AREAS. IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING, COMPACTED SURFACES SHOULD BE SCARFIED 6. TO 12" IMMEDIATELY PRIOR TO TOPSOIL APPLICATION. THIS WILL HELP ENSURE A GOOD BOND BETWEEN THE TOPSOIL AND SUBSOIL. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION

15. PRIOR TO SEEDING, TOPSOIL SHALL BE WORKED TO PREPARE A PROPER SEEDBED. THIS SHALL INCLUDE RAKING OF THE TOPSOIL AND REMOVAL OF DEBRIS AND STONES, ALONG WITH OTHER REQUIREMENTS OF THE STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION.

16. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCTING SOILS, ANT SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE BURIED WITH LIMESTONE IN ACCORDANCE WITH THE STANDARD AND BE COVERED WITH A MINIMUM OF 12 OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO TOPSOIL APPLICATION AND SEEDBED PREPARATION. IF THE AREA IS TO RECEIVE TREE OR SHRUB PLANTINGS, OR IS LOCATED ON A SLOPE, THEN THE AREA SHALL BE COVERED WITH

17. MULCHING TO THE STANDARDS IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONAL ROC'S ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING. PERMANENT STABILIZATION MUST THEN BE COMPLETED DURING THE OPTIMUM SEEDING SEASON IMMEDIATELY FOLLOWING THE CONDITIONAL ROC, OR THE COMPLETION OF WORK IN A GIVEN AREA.

18. HYDROSEEDING IS A TWO-STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER, LIME, ETC., ALONG WITH MINIMAL AMOUNTS OF MULCH TO PROMOTE CONSISTENCY, GOOD SEED—TO—SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE, UPON COMPLETION OF THE SEEDING OPERATION, HYDROMULCH SHOULD BE APPLIED AT A MINIMUM RATE OF 1500 LBS, PER ACRE IN SECOND STEP. THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE STANDARDS. THE USE OF HYDROMULCH ON SLOPED AREAS IS DISCOURAGED.

19. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF THE CONSTRUCTION PROJECT. ALL SEDIMENT WASHED, DROPPED, TRACKED OR SPILLED ONTO PAVED SURFACES SHALL BE IMMEDIATELY REMOVED.

20. THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS
THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION, AND FOR EMPLOYING ADDITIONAL EROSION AND
SEDIMENT CONTROL MEASURES AT THE REQUEST OF THE MERCER COUNTY SOIL CONSERVATION

21. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.

ALL DETENTION / RETENTION BASINS MUST BE FULLY CONSTRUCTED (INCLUSIVE OF ALL STRUCTURAL COMPONENTS AND LINERS) AND PERMANENTLY STABILIZED PRIOR TO PAVING OR PRIOR TO THE ADDITION OF ANY IMPERVIOUS SUFFACES. PERMANENT STABILIZATION INCLUDES, BUT MAY NOT BE LIMITED TO: TOPSOIL, SEED, STRAW MULCH AND BINDERS OR EROSION CONTROL BLANKETS ON ALL SEEDING, ALL AGRONOMIC REQUIREMENTS AS SPECIFIED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INSTALLATION OF THE OUTFLOW CONTROL STRUCTURES AND DISCHARGE STORM DRAINAGE PIPING, LOW FLOW CHANNELS, CONDUIT OUTLET PROTECTION, EMERGENCY SPILLWAYS, AND LAP RING PROTECTION.

23. THE RIDING SURFACE OF ALL UTILITY TRENCHES WITHIN PAVED AREAS SHALL BE 3/4" CLEAN STONE OR BASE PAVEMENT UNTIL SUCH TIME AS FINAL PAVEMENT HAS BEEN INSTALLED. TEMPORARY SOIL RIDING SURFACES ARE PROHIBITED.

24. ALL CONSTRUCTION DEWATERING (TRENCHES, EXCAVATIONS, ETC.) MUST BE DONE THROUGH AN INLET OR OUTLET FILTER IN ACCORDANCE WITH THE STANDARD FOR DEWATERING OR AS DEPICTED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN. DISCHARGE LOCATIONS FOR THE DEWATERING OPERATION MUST CONTAIN PERENNIAL VEGETATION OR SIMILAR STABLE SURFACE.

25. ALL SWALES OR CHANNELS THAT WILL RECEIVE RUNOFF FROM PAVED SURFACES MUST BE PERMANENTLY STABILIZED PRIOR TO THE INSTALLATION OF PAVEMENT. IF THE SEASON PROHIBITS THE ESTABLISHMENT OF PERMANENT STABILIZATION, THE SWALES OR CHANNELS MAY BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE STANDARDS.

26. NJSA 4:24-39 ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY BE ISSUED BY THE MUNICIPALITY BEFORE THE PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN SATISFIED. THEREFORE, ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS MUST BE COMPLETED BEFORE THE DISTRICT ISSUES A REPORT OF COMPLIANCE OR CONDITIONAL REPORT OF COMPLIANCE, WHICH MUST BE FORWARDED TO THE MUNICIPALITY PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY, RESPECTIVELY.

### TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

. SITE PREPARATION A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, PG. 19-1, IN STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (SSESCNJ).

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSION, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE SSESCHU ENGINEERING STANDARDS.

C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 8" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). 2. SEEDBED PREPARATION

A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.

B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED IN ACCORDANCE WITH THE ABOVE. D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF

A SELECT SEED FROM RECOMMENDATIONS IN TABLE 7-2. THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF THE SPECIFIED SEED AND PLANTING DATES WITH THE PROJECT ENGINEER OR LANDSCAPE

		TABLE 7	=2			
SEED SELECTION	SEEDIN (pound	G RATE	OPTIMU Based on	OPTIMUM SEED		
SEED SELECTION	Per Acre	Per Acre Sq. Ft.	ZONE 5b, 6s	ZONE 6b	ZONE 7a, b	SEED DEPTH* (inches)
COOL SEASON GRASSES						
1. PERENNIAL RYEGRASS	100	1.0		3/1-5/15 8/15-10/1	2/15-5/1 <b>5</b> /15-10-15	.05
2. SPRING OATS	86	2.0			2/15-5/1 8/15-10/15	1.0
3. WINTER BARLEY	96	2.2	8/1-9/15	8/15-10/1	8/15-10/15	1.0
4. ANNUAL RYEGRASS	100	1.0		3/15-6/1 8/1-9/15	2/15-5/1 8/15-10/15	0.5
5. WINTER CEREAL RYEGRASS	112	2.8	8/1-11/1	8/1-11/15	8/1-12/15	1,0
WARM SEASON GRASSES						
5. PEARL MILLET	20	0.5	6/1-8/1	5/15-8/15	5/1-0/1	1.0 - 5.00
6. MILLET (GERMAN OR HUNGARIAN)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	1.0

1. SEEDING RATE FOR WARM SEASON GRASS, SELECTIONS 5-7 SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF DETERMINED BY A GERMINATION TEST RESULT. NO ADJUSTMENT IS REQUIRED FOR COOL SEASON GRASSES.

2. MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR SEEDED AREA CAN BE IRRIGATED.

B. CONVENTIONAL SEEDING. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF 1/4 TO 1/4 INCH, BY RAKING OR DRAGGING, DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED

C. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION 4, MULCHING) HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY HE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED

D. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION

4. MULCHING — MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT

THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRINE THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE

APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND O WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

1. PEG AND TWINE. DRIVE B TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS. 2. MULCH NETTINGS. STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

3. CRIMPER (MULCH ANCHORING TOOL). A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR

4. LIQUID MULCH-BINDERS. - MAY BE USED TO ANCHOR HAY OR STRAW MULCH. G. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

b. USE ONE OF THE FOLLOWING:

(1) ORGANIC AND VEGETABLE BASED BINDERS — NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS O MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRARED RETRIEVES OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS, USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR

(2) SYNTHETIC BINDERS — HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

NOTE: ALL NAMES GIVE ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A COMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS. B. WOOD-FIBER OR PAPER-FIBER MULCH. SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 PONDS PER ACRE (OR AS RECOMMENDED BY THE PROJECT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEFDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED, USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

C. PELLETIZED MULCH. COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORMA MULCH MAT. PELLETIZED MULCH SHALL BE APPLIES IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS./1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEE FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

C. PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

A GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING. B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.

C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND

L SEEDBED PREPARATION

A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP: //NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.

B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM C. HIGH ACID PRODUCING SOIL. SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED REPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID—PRODUCING SOILS FOR SPECIFIC

A. SELECT A MIXTURE FROM TABLE 4-3 OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEED GERMINATION SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE, NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS

1. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN RATES MY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING, ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE. 2. WARM SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85 DEGREES F AND ABOVE. SEE TABLE 4-3, MIXTURES 1 TO 7. PLANTING RATES FOR WARM SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.

3. COOL SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85 DEGREES F. MANY GRASSES BECOME ACTIVE AT 65 DEGREES F. SEE TABLE 4-3, MIXTURES 8-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL SEASON GRASSES.

B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED C. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON-SITE WILL BE MAXIMIZED. D. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED, SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION 4 BELOW, MULCHING). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL POOR SEED TO SOIL CONTACT OCCURS, REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO

4. MULCHING - SEE PARAGRAPH 4 UNDER TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION. 5. IRRIGATION (WHERE FEASIBLE) - IF SOIL MOISTURE IS DEFICIENT, AND MULCH IS NOT USED, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES. TOPDRESSING - SINCE SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) IS PRESCRIBED IN SECTION 2. A SEEDBE PREPARATION, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 400 POUNDS PER ACRE OR 10 POUNDS PER 1,000 SQUARE FEET.

7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION — THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-3 ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUEST A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE.

APPLICATION	PLANTING MIXTURES BY SOIL DRAINAGE CLASS/I (See Toble 4-3)							
74 1 2300111011	Excessively Drained	Well to Moderately Well Drained	Somewhat Poorly to Poorl Drained					
tesidentici/commercial lots	10, 12, 15	6, 10, 12, 13, 14, 15	16					
and and channel banks, dikes,	2, 5, 6, 10	5, 6, 7, 8, 9, 15	2, 8, 16, 17					
rainage ditates, suales, detention	2, 9, 11	2, 7, 9, 11, 12, 17	2, 9, 18, 17					
Titer Stripe	12	11, 12	11, 12					
Rosses woterway, apiliwaya	2, 3, 9, 10, 12	6, 7, 9, 10, 11, 12	2, 9, 11, 12					
Recreation areas, athletic fields	5, 12, 15, 18	12, 13, 14, 15, 18	16					
Special Problem Sites Steep slopes and bunks, roadsides, borrow areas	2, 3, 4, 6	2 3 5 7, 8 9, 10, 15, 18	2, 8, 10, 11, 12					
Sand and gravel pite, Sanitary and files	1, 2, 3, 4, 6, 20	1, 2, 3, 4, 5, 6, 8, 15, 20	2, 8					
Dradged material, spolibania, borrow areas	2, 3, 6, 20	2,3,6,11	2, 8					
Streambanka & shorelines 2	2, 8, 20, 210	2, 8, 19b, 20 21c, 21b	2, 8, 19a, 21a, b, c, d					
Utility rights-of-way Refer to Soil Surveys for d	3, 7, 18	3,7	8, 9, 17					

See App. E of Stds. for Soil Erosion & Sediment Control in N.J. for description of turf grasses and cultivars.

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, PG. 19—1, IN STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (SSESCHJ). B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSION, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE SSESONJ ENGINEERING STANDARDS.

2. PROTECTIVE MATERIALS — APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND—SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

A. UNROTTED SMALL-GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED RATES ABOVE HAVE BEEN MET WHEN THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, I.E. THE SOIL CANNOT BE SEEN BELOW THE MULCH. B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.

C. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDROSEEDER.

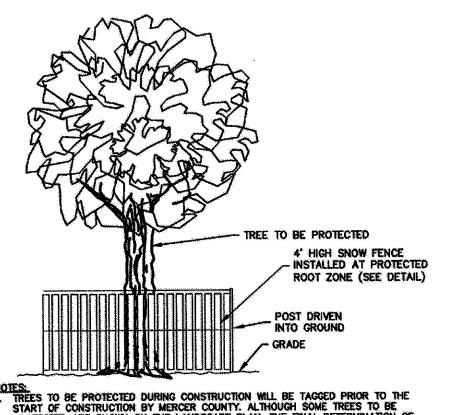
D. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED. E. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT. F. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO 3. MULCH ANCHORING — SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. MULCH ANCHORING SHALL BE DONE BY THE FOLLOWING METHODS:

A. PEG AND TWINE - SEE PARAGRAPH 4.A.1 UNDER TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION. B. MULCH NETTINGS - STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG. C. CRIMPER MULCH ANCHORING COULTER TOOL — A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES, ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.

1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

G. ORGANIC AND VEGETABLE BASED BINDERS — NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSICLOGICALLY HARMLESS AND NOT RESULT IN A PHYTO—TOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER.

b. SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILLITED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS. NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.



NOTES:

1. TREES TO BE PROTECTED DURING CONSTRUCTION WILL BE TAGGED PRIOR TO THE START OF CONSTRUCTION BY MERCER COUNTY. ALTHOUGH SOME TREES TO BE PROTECTED ARE SHOWN ON THE LANDSCAPE PLAN. THE FINAL DETERMINATION OF THOSE TO BE PROTECTED WILL BE MADE BY MERCER COUNTY IN THE FIELD.

2. PROTECTIVE FENCING IS TO BE MAINTAINED DURING CONSTRUCTION AS DIRECTED BY MERCER COUNTY.

MERCER COUNTY.

3. NO CONSTRUCTION ACTIVITY IS PERMITTED WITHIN THE PROTECTIVE FENCING WITHOUT PERMISSION FROM MERCER COUNTY.

4. AT THE COMPLETION OF CONSTRUCTION ALL PRESERVED TREES WILL BE PRUNED AS NECESSARY TO CORRECT ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITY. TREE PROTECTION DETAIL

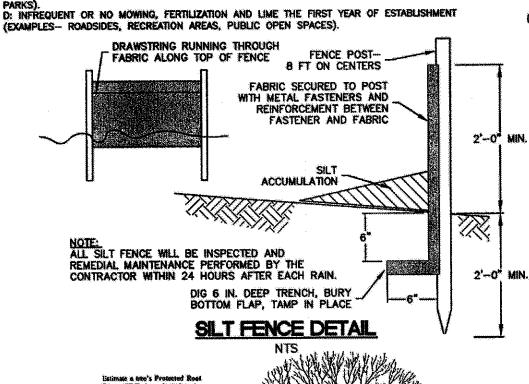
	PLANTIN RATE /	•	ZGP	8 OD, 90	1		S 70NE	versere serve	e Planting Journ 4-1 Zon	e 7a 7a		Mantenance Lovel /4	Remorks
CEACLE!	(be/am	Use/100 0 eq.8	%"	₩.	<b>%</b>	<b>%</b> :	<b>W</b>	1/8"	//////////////////////////////////////	<b>次</b>	1/36	28	
SEASON MOXTURES													
Pinelands tland Raserve ad Mittures See ale 4-4 pg 4-17			0			٥			٥				
Hichgross and/or instal panicyross is or Flatpea	15 15 20	.35 .35 .45	0			0			0			C-D	
sertongue or eltotgrass edtop	15 20 1	.55 .45 .1	0			0			0			¢-6	Use Decrease if pil < 4.0. Switchgross is superior widdiff plant. Use for waterways. Redtop provides quick cover.
ritchgross ertongue de Biuestem eep Fescue us Purtridge ped	15 10 20 20 10	.35 .25 .45 .45 .25	0			0		<i>'</i>	0			C-D	Pinelanda mixtura
eltchgrass g Bluestern Itie Bluestern and lovegrass postol ponicgrass	10 5 5 4	25 .10 .10 .10	0			0			0			C-D	Hothe warmerson mixture
oyelograss (seed) oyelograss (seed)	15 30	0.35 0.70	0			0			Ø			A-D	Bermudagrass has superior saft tolerance. Zoysla has greater wear tolerance.
L SEASON MOCTURES													General low maintenance mixture
ine Feacue (Blend) lard Feacue trong Creeping red secue (entucky bissegrass forencial ryegrass lug White clover see note at right)	130 45 20 5	3 01 05 01	A.	A <sup>5</sup>	9	٨	A <sup>5</sup>	٥	À	<b>A</b> 5	0	B÷0	White clover can be removed when used to establish lawns
Strong Creeping red escuse (entucky bluegrass ferential ryegrass or Redtop ilus White clover	130 50 20 10 5	3 1 0.5 0.25 0.1	٨	A <sup>5</sup>	0	۸	,5	0	A	ĄŠ	0		Suitable waterway mit. Canade bivegram more drought tolerant, use Redtap for increased drought tolerance.
oil fescue (turf- ppe) or Strong resping red fescue r Perennial ryegross tus Crownvetch or intpea.	30 30 30 30 25	0.7 0.7 0.7 0.6	0	V <sub>6</sub>		G	A <sup>6</sup>		Q	,6		8-0	Tell fascue best selected for droughty conditions. Use creeping red fascue in heavy shade. Use Sutpect to suppress woody vegetation.
iertangue ledtap Mid rye (Elymus) witchgrass	20 2 15 25	0.45 0.05 0.35 0.60	0			0			0			C-0	Native wet mix.
Toll feacus (turf- type) Perennial rysgrams Water clover	265 20 5	6 5 .10 0.10	O	Ą <sup>5</sup>	AS	0	A <sup>5</sup>	<sub>A</sub> 5	0	<sub>4</sub> 5	,5	C-D	White clover can be excluded an icem after
Kentucky Bluegrass Turf-type Tall fescu	15	0.33 1 5	A	A <sup>5</sup>	0	Â	<sub>Å</sub> 5.	A 0	٨	5	0	¢-0	Filter strip use for nutrier uptake
uri-type Tall Feach bland of 3 cuttivan	350	8	٨	<b>∆</b> 5	0	A	<sub>A</sub> 5	۰		Ą5	0	C-D	use in a managed inter strip for nutrient uptake
tord Feacus and/or Invaling feacus and or Strong creeping and feacus Ferential ryagrams	16		20 A	<b>,</b> ,5	0		<b>,5</b>	0		<b>,3</b>	6	<b>A-C</b>	Consent Lean/recreation
(y. bluegrase (blend lat feetue (y. Bluegrase (blend Perennial ryegrase (blend)	265	6 0.5 0.5	٨	۸ <sup>5</sup>	0	A	۸5	O	٨	<b>,</b> 5	0	A-B	Attrictic Blac/Mik 3 cultivers of Kentucky Buograms
Hard feacus Cheelings feacus Strong creeping red feacus Personial ryagrass	130 45 45 45	3 1 1 0.25	٨	<b>A</b> 5	0	٨	ĄŠ	0	٨	<b>A</b> <sup>5</sup>	0	C-0	Low maintenance fine feacuse form mix
Rough bluegrous Strong Grouping red feacue	90 130	20 3	٨	A <sup>5</sup>	0	A	Ą <sup>5</sup>	0	٨	Ą <sup>5</sup> .	0	C-0	Motes ahada.
Creeping bentgrass Creeping red feacue Nikali ealtgrass	45 45 46	1	٨	45	0	٨	A <sup>5</sup>	A O	٨	5	0	8-0	Lise bentgrass under wett conditions. Satigrass will only persist under saline conditions.
ord or Sheeps feacu I.E. wildflower mildu	e 25 re 12	0.60 0.35	0	٨	0	0	٨	0	0	À	0	C-0	Regional Widdlower mix. Hydroxecoting not recommended.
a. Smooth cordgras b. Sattmeodow Cordgrass	<b>V40</b> 0					0	Before July 1		0	Before July 1		D	Planted in the intertibility zone. Planted above mear high tide.
American beachgras Coastal panlograss Coastal panlograss	20 20	.45				Before April 1			0			Đ	Coastal panlograss may be intereseded between rows of beachgrass.
g. Purpleceler willow b. Dwarf willow c. Redomerologwood d. Silky dogwood	\$6.50 \$6.50 \$6.00		Sefore May 10			Before May 10			Before May 1			Đ	Also refer to Chapter 16 and 18 of USDA NRCS Engineering Field Hundhoo

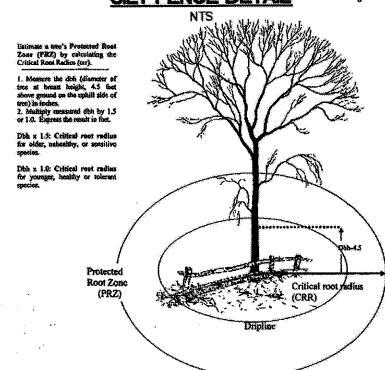
THE AMOUNT OF PLS AS DETERMINED BY GERMINATION TESTING RESULTS. NO ADJUSTMENT IS REQUIRED FOR COOL SEASON GRASSES (SEED MIXTURES 8-20).

2. SEEDING MIXTURES AND/OR RATES NOT LISTED ABOVE MAY BE USED IF RECOMMENDED BY THE LOCAL SOIL CONSERVATION DISTRICT, NATURAL RESOURCES CONSERVATION SERVICE; RECOMMENDATIONS OF RUTGERS COOPERATIVE EXTENSION MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. LEGUMES (FLATPEA. CROWNVETCH, TREFOIL, LESPEDEZA) SHOULD BE MIXED WITH PROPER INOCULATE PRIOR TO PLANTING. 3. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT F COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE OF THE SEEDED AREA AND MOWED ONCE. GRASS SEED MIXTURE CHECKED BY THE STATE SEED ANALYST, NEW JERSEY DEPARTMENT OF ACRICULTURE, TRENTON, NEW JERSEY, WILL ASSURE THE PURCHASER THAT THE MIXTURE OBTAINED IS THE MIXTURE ORDERED, PURSUANT TO THE N.J. STATE SEED LAW, N.J.S.A. 4:8—17.13 ET. SEQ.

O - OPTIMAL PLANTING PERIOD A - ACCEPTABLE PLANTING PERIOD A: INTENSIVE MOWING, (2-4 DAYS), FERTILIZATION, LIME, PEST CONTROL AND IRRIGATION (EXAMPLES—HIGH MAINTENANCE LAWNS, COMMERCIAL AND RECREATION AREAS, PUBLIC FACILITIES).

B: FREQUENT MOWING, (4-7 DAYS), OCCASIONAL FERTILIZATION, LIME AND WEED CONTROL (EXAMPLES—HOME LAWNS, COMMERCIAL SITES, SCHOOL SITES). PERIODIC MOWING (7-14 DAYS), OCCASIONAL FERTILIZATION AND LIME (EXAMPLES - HOME LAWNS,

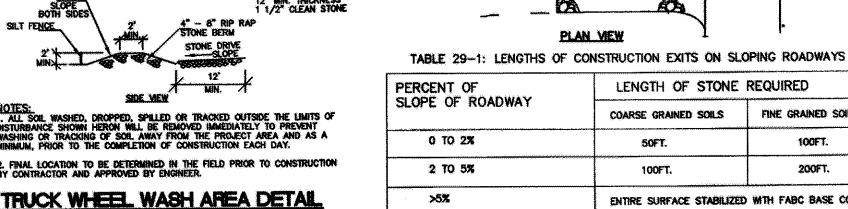




ROOT ZONE PROTECTION DURING CONSTRUCTION

GadB SaaD (MbpB SOILS MAP SCALE: 1" = 200 SOIL NAME AND DESCRIPTION Evestoro loamy sand, 0 to 5 percent slopes Sassafras sandy loam, 2 to 5 percent slopes 1 inch = 200 feet Sassafras sandy clay loam, 5 to 10 percent slopes, severely eroded

NATIONAL RESOURCES CONSERVATION SERVICE (NRCS). WEB SOIL SURVEY UTM ZONE 18N NAD83, MERCER COUNTY, NEW JERSEY. VERSION 10, DATED SEPTEMBER 24, 2014. EXEST. GROUND TOP VIEW



2 EACH DUMP STRAPS-

EXPANSION RESTRAINT (ST#4-

THOMAS E. O'SHEA

N.I. PROFESSIONAL ENGINEER LIC. NO. GE 31228

(IF REQUIRED)

INSTALLATION DETAIL

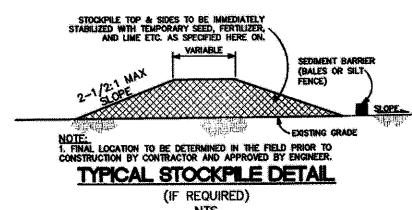
LENGTH OF STONE REQUIRED FINE GRAINED SOILS COARSE GRAINED SOILS 100FT. 200FT. ENTIRE SURFACE STABILIZED WITH FABC BASE COURSE ! \* AS PRESCRIBED BY LOCAL ORDINANCE OF OTHER GOVERNING AUTHORITY.

PLAN VIEW

1. PLACE STABILIZED CONSTRUCTION ENTRANCE AT LOCATION(S) AS SHOWN ON THE SCIL EROSION AND SEDIMENT CONTROL PLAN. 2. STONE SIZE SHALL BE ASTM C-33, SIZE NO. 2 OR 3, CRUSHED STONE. 3. THE THICKNESS OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL NOT BE LESS THAN SIX (6"). . THE WIDTH AT THE EXISTING PAVEMENT SHALL NOT BE THAN THE FULL WIDTH OF POINTS OF INGRESS AND

5. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W. OR PAVEMENT. THIS REQUIRES PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. BAG DETAIL

6. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY. CONSTRUCTION ENTRANCE DETAIL (IF REQUIRED)



NLET PROTECTION DETAIL DATE DET.BY CKD.81 REV. DESCRIPTION

DRAWN BY

DATE 11/9/15

CHECKED BY BRP DATE 11/9/15

van note-harvey associates, pc consulting engineers, planners & land surveyors 103 College Road East • Princeton, NJ 08540 • 609-987-2323 211 Bayberry Drive ● Cape May Court House, NJ 08210 ● 609-465-2600

SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS ROGERS HOUSE CONSTRUCTED RUINS PREPARED FOR

ORDER No

MERCER COUNTY PARK COMMISSION SITUATED IN MERCER CO., N. WEST WINDSOR TOWNSHIP NOVEMBER 9, 2015 SCALE AS SHOWN

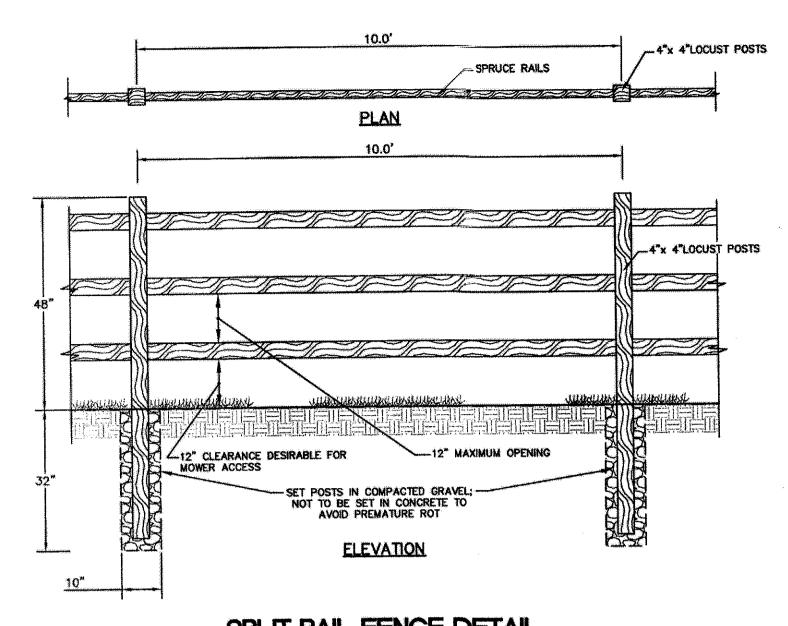
FIELD BK

42455--180-C-1 CE-6 PAGE 400-21

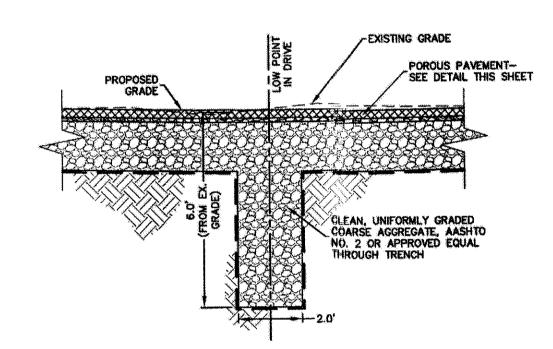
FILE No.

SHEET N

N: \P\42455\DWG\42455-SCD-PLT.DWG



SPLIT RAIL FENCE DETAIL

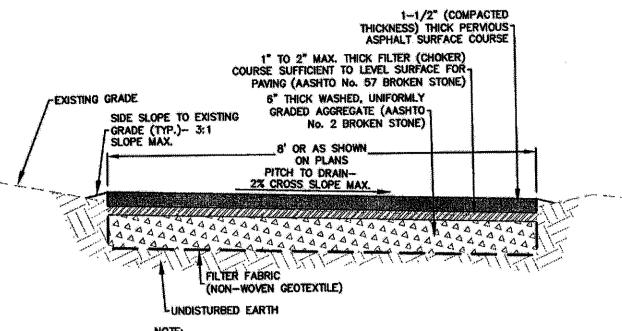


NOTES:

1. TO PREVENT COMPACTION OF THE SUBGRADE, EXCAVATION MUST BE PERFORMED BY EQUIPMENT PLACED OUTSIDE OF THE LIMITS OF THE DRIVE WHENEVER POSSIBLE.

2. TRENCH WIDTH TO SPAN ENTIRE WIDTH OF ROAD.

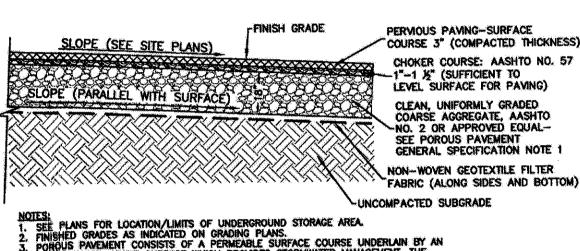
INFILTRATION TRENCH IN DRIVE DETAIL



NOTE:

1. TO PREVENT COMPACTION OF THE SUBGRADE, EXCAVATION MUST BE PERFORMED BY EQUIPMENT PLACED OUTSIDE OF THE LIMITS OF THE WALK WHENEVER POSSIBLE. 2. THE SURFACE COURSE OF THE WALK SHALL BE VACUUM SWEPT AT LEAST FOUR TIMES A YEAR. THIS SHOULD BE FOLLOWED BY A HIGH PRESSURE HOSING. ALL DISLODGED SEDIMENT AND OTHER PARTICULATE MATTER MUST BE REMOVED AND PROPERLY DISPOSED.

POROUS ASPHALT WALK DETAIL



## POROUS PAVEMENT TYPICAL SECTION

POROUS PAVEMENT CONSTRUCTION SECUENCE

1. The porous pavement should be installed toward the end of the construction period, if possible.

3. Where erosion of subgrade has caused accumulation of fine materials and/or surface ponding, this material shall be removed with light equipment and the underlying solls scarified to a minimum depth of 6 inches with a York rake (or equivalent) and light tractor. All fine grading shall be done by hand. All bed bottoms should be at a level grade unless specified otherwise. 4. Earthen berms/traffic Islands (where applicable)

compaction if proven stable during construction. 5. Geotextile and stone bed aggregate should be placed immediately after approval of subgrade preparation. Geotextile should be placed in accordance with manufacturer's standards and recommendations. Adjacent strips of geotextile should overlap a minimum of 16 in. The geotextile should extend at least 4 feet outside of bed and folded back along the edges of the finished bed to prevent runoff or sediment from entering the storage bed. This edge strip should remain in place until all bare soils contiguous to beds are stabilized and vegetated. As the site is fully stabilized, excess geotextile along bed edges can be cut back to bed edge.

6. Clean (washed) uniformly graded stone aggregate (AASHTO No. 2) shall be placed in the bed in 8—inch lifts. Each layer should be lightly compacted, with the construction equipment kept off the bed bottom as much as possible. One pass with vibration is allowable (low amplitude, high frequency) to interlock aggregates. Continuous vibratory passes are not allowed.

7. Apply tack coat 64E-22 as specified in NJDOT Standard Specification (S.S.) 401.03.02.2. Place asphalt at a laydown temperature of 225T or recommended by the binder manufacturer. Ensure that the porous asphalt meets the thickness and tolerance requirements specified in S.S. Tables 902.03.03-1 and 902.03.03-2. Spread and grade asphalt as specified in S.S. 401.03.03.E. Do not apply polymerized joint adhesive or tack coat

8. The porous asphalt should be placed directly on the leveled stone subbase in a single 4 inch loose lift and compacted with a minimum of two (2) passes of a non-vibratory, 2-axie railer, to a finished depth of 3 inches. Rollers shall be operated at a slow, uniform speed not exceeding 2 1/2 mph. If necessary to prevent adhesion of the porous asphalt to the rollers, keep the wheels moistened with water mixed with a very small amount of detergent. Remove and replace porous asphalt that becomes loose, broken, or otherwise defective or that shows an excess or deficiency of asphalt binder material.

9. When paying in echelon, keep the rollers for the first lane approximately 6 inches from the unconfined edge adjacent to the second paying operation. After parous asphalt from the second payer is placed against the uncompacted edge of the mat from the first payer, compact the asphalt on both sides of the joint. Prevent lateral or vertical displacement of the unconfined edge during the compaction operation. Ensure that the edge of the drums of the rollers extends over the free edge of the mat by at least 6 inches. When compacting the butt or wedge joint, while paying the adjacent lane, place the roller on the newly placed payement and overlap the joint by approximately 6 inches.

10. The full permeability of the finished pavement surface should be tested by application of clean water at a rate of at least 5 gpm over the surface using a hose or other distribution device. All applied water should infiltrate directly without puddle formation, ponding or surface runoff 11. The proposed porous pavement area of the site shall be cordoned off from heavy construction equipment and the stockpilling of materials shall be prohibited.

12. Do not allow traffic or construction equipment on the porous asphalt until the surface temperature is less than 170%. Vehicular traffic shall be restricted from the finished surface for a minimum of 72 hours following final paving.

### POROUS PAVEMENT GENERAL SPECIFICATIONS

Stone for infiltration beds shall be 2-inch to 1-inch uniformly graded coarse aggregate, with a wash loss of no more than 0.5%, AASHTO size number 2 per AASHTO Specifications or approved equivalent, Part 1, 19th Ed., 1998, or later and shall have voids 40% as measured by ASTM-C29. Choker base course aggregate for beds shall be 3/8 inch to 3/4 inch uniformly graded coarse aggregate AASHTO size number 57 per Table 4, AASHTO Specifications, Part 1, 13th Ed., 1998 (p. 47).

- 2. Non-Woven Geotextile shall consist of needled nonwoven polypropylene fibers and meet the following properties:
- a. Grab Tenelle Strength (ASTM-D4632) > 120 lb.
  b. Mullen Burst Strength (ASTM-D3786) > 225 ps.
  c. Flow Rate (ASTM-D4491) > 95 gal
  d. UV Resistance after 500 hrs (ASTM-D4355) > 70% > 225 psi > 95 gal/min/ft sq.
- Heat-set or heat-calendared fabrics are not permitted

Acceptable types include Mirafi 140 N, Geotex 451, or approved others. 3. Pipe (where applicable) shall be continuously perforated, smooth interior, with a minimum inside diameter of 6-inches. High-density polyethylene (HDPE) pipe shall meet AASHTO M252, Type S or AASHTO M294, Type S.

4. Storm Drain inlets and Structures
a. Concrete Construction: Concrete construction shall be in accordance with current NJDOT specifications.
b. Precast concrete inlets and manholes: Precast concrete inlets may be substituted for cast—in—place structures and shall be constructed as

specified for cast—in-place.
c. All PVC Catch Basins/Cleanouts/inline Drains shall have H-20 rated grates.
d. Steel reinforcing bars over the top of the outlet structure, where specified, shall conform to ASTM A615, grades 60 and 40.

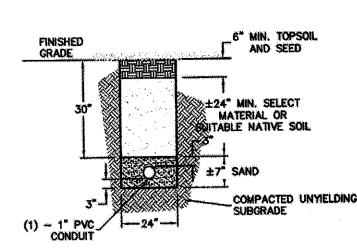
D. Pervious situminous aspnart

Bituminous surface course for pervious paving should be three (3) inches thick (compacted thickness) with a bituminous mix of 5.75% to 6.75% by weight dry aggregate. In accordance with ASTM D6390, drain down of the binder shall be no greater than 0.3%. If more absorptive aggregates, such as limestone, are used in the mix, then the amount of bitumen is to be based on the testing procedures outlined in the National Asphalt Pavement Association's information Series 131 — "Pervious Asphalt Pavemente" (2003) or NJDOT equivalent.

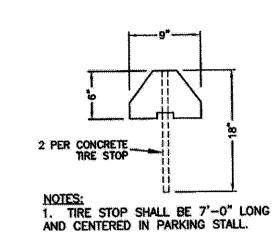
Use neat asphalt binder modified with an elastomeric polymer to produce a binder meeting the requirements of PG 64E—22 as specified in AASHTO MP—1. The elastomer polymer shall be styrene—butadiene—styrene (SBS), or approved equal, applied at a rate of 3% by weight of the total binder. The composite materials shall be thoroughly blended at the asphalt refinery or terminal prior to being loaded into the transport vehicle. The polymer modified asphalt binder shall be heat and storage stable.

Aggregate shall be minimum 90% crushed material and have a gradation of: U.S. Standard Sleve SizePercent Passing ½ (12.5 mm) 100% 3/8 (9.5 mm)80%-100% 4 (4.75 mm)30%-50% 8 (2.36 mm)5%-15% 16 (1.18 mm)7%-13% 30 (0.60 mm)0%-4% 200 (0.075 mm) 2%-5%. Add hydrated lime at a desage rate of 1.0% by weight of the total dry aggregate to mixes containing granite. Hydrated lime shall meet the requirements of ASTM C 977. The additive must be able to prevent the separation of the asphalt binder from the aggregate and achieve a required tensile strength ratio (TSR) of at least 80% on the asphalt mix when tested in accordance with AASHTO T 283. The asphaltic mix shall be tested for its resistance to stripping by water in accordance with ASTM D-1664. If the estimated coating area is not above 95%, anti-stripping agents shall be added to the asphalt.

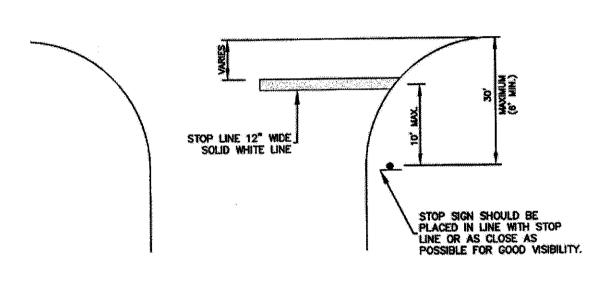
Do not place pavement if it is precipitating. Do not allow trucks to leave the plant when precipitation is imminent. The Contractor may resume operations when the precipitation has stopped and the surface is free of water. Do not pave if the ambient temperature is below 50°F. The temperature of the bituminous mix shall be between 300 degrees Fahrenhelt and 350 degrees Fahrenhelt (based on the recommendations of



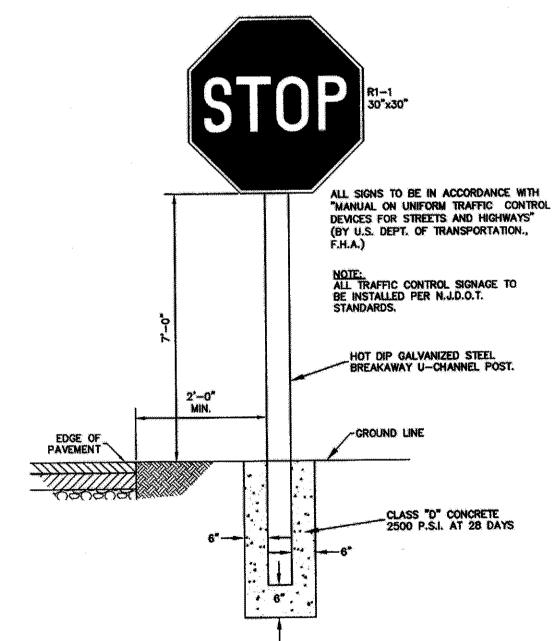
## IN NON-PAVED AREAS ELECTRICAL CONDUIT DETAIL



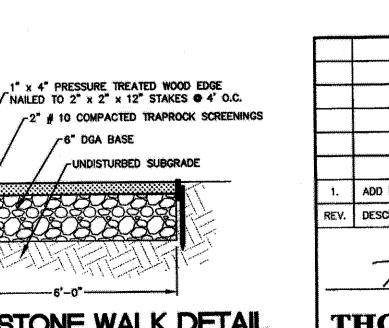
CONCRETE WHEEL STOP DETAIL



STOP LINE DETAIL

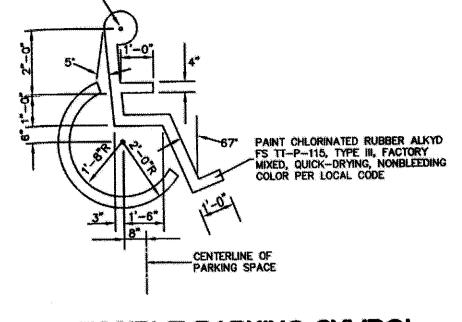


TYPICAL SIGN MOUNTING DETAIL N.T.S.

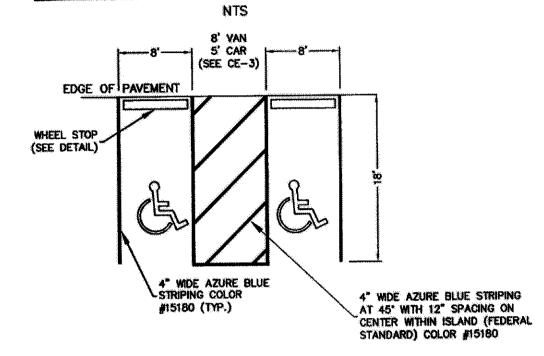


CRUSHED STONE WALK DETAIL

76" DGA BASE

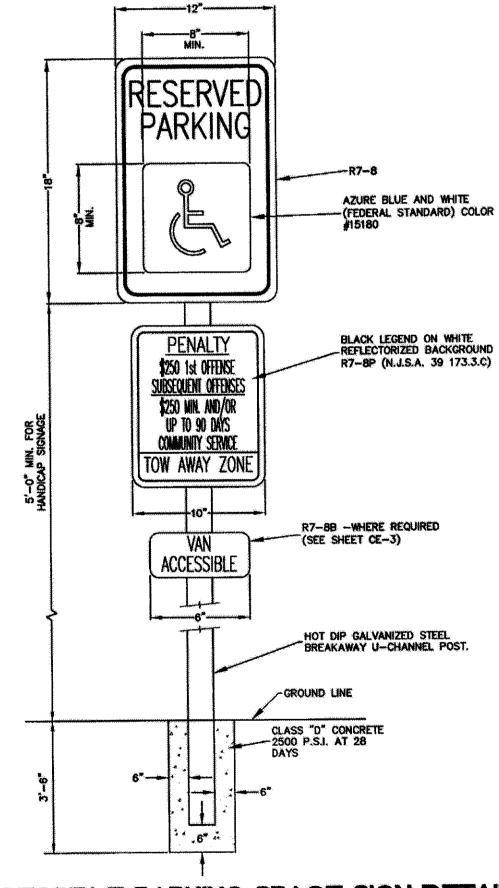


## ACCESSIBLE PARKING SYMBOL

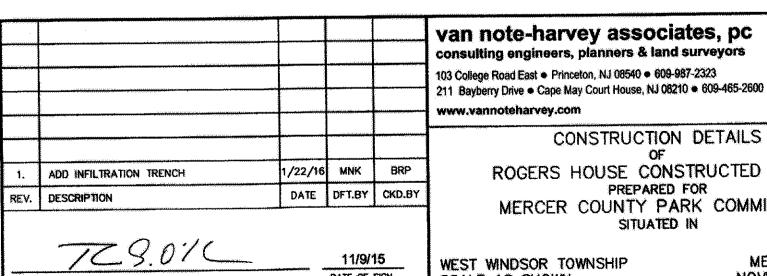


NOTE:
1. ALL HANDICAP STRIPING AND MARKINGS SHALL BE ACRYLIC EMULSION PAINT UNLESS OTHERWISE DIRECTED BY ENGINEER/OWNER.

# ACCESSIBLE PARKING SPACE DETAIL



ACCESSIBLE PARKING SPACE SIGN DETAIL

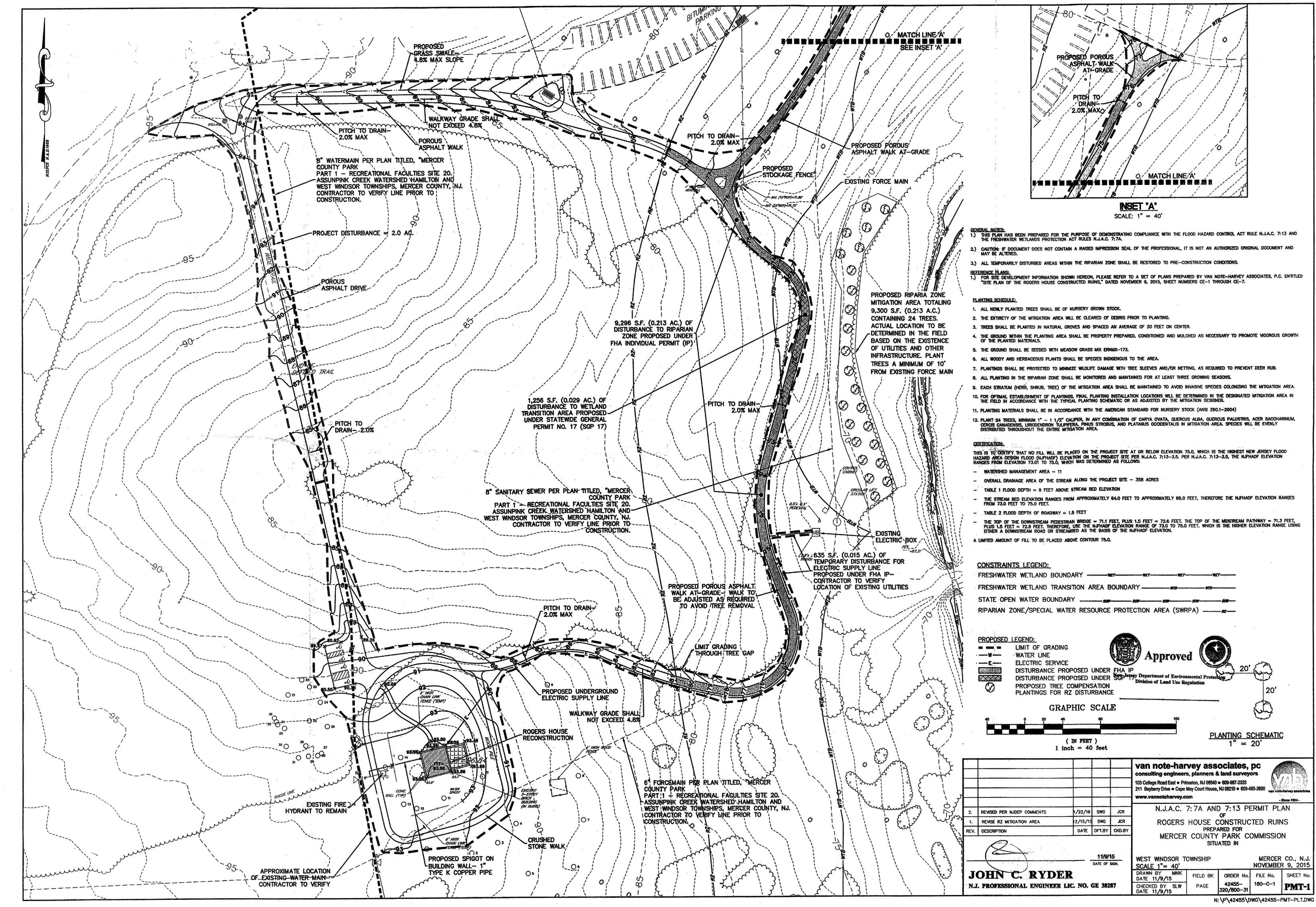


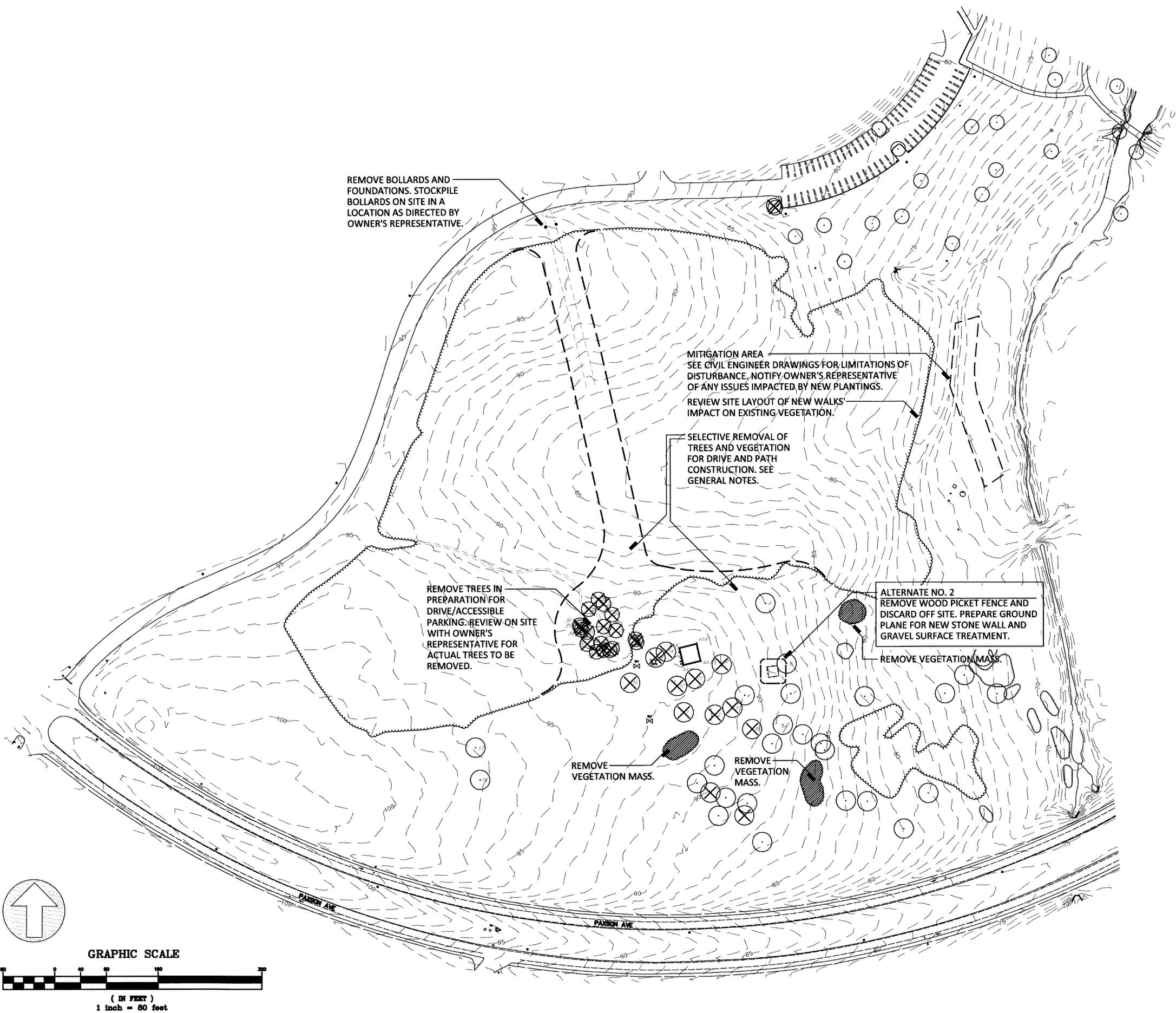
www.vannoteharvey.com - Since 1894 -CONSTRUCTION DETAILS ROGERS HOUSE CONSTRUCTED RUINS PREPARED FOR MERCER COUNTY PARK COMMISSION

THOMAS E. O'SHEA N.J. PROFESSIONAL ENGINEER LIC. NO. GE 31228

SITUATED IN MERCER CO., N. WEST WINDSOR TOWNSHIP NOVEMBER 9, 2015 SCALE AS SHOWN DRAWN BY MNK SHEET NO FILE No. FIELD BK ORDER No. DATE 11/9/15 42455-180-C-1 CE-7 CHECKED BY BRP DATE 11/9/15 PAGE 400-21

N:\P\42455\DWG\42455-DTL-PLT.DWG





- B -

-c-

**GENERAL NOTES** 

- SEDIMENTATION AND EROSION CONTROLS ARE TO BE IN PLACE PRIOR TO STARTING VEGETATION REMOVALS OPERATIONS.
- TREE PROTECTION MEASURES TO BE IN PLACE PRIOR TO STARTING REMOVAL OPERATIONS.
- PROVIDE A SCHEDULE OF TREES SPECIES AND CALIPER SIZE OF TREES INDICATED FOR REMOVAL ON SITE. MARK AND REVIEW TREES ON SITE WITH OWNER'S REPRESENTATIVE PRIOR TO TREE REMOVAL OPERATIONS
- UNDERSTORY INVASIVE SPECIES ARE TO BE REMOVED WITHIN CONSTRUCTION
- UNDERSTORY NATIVE SHRUBS TO BE RETAINED WHERE THEY ARE NOT OTHERWISE AFFECTED BY EARTH MOVING OPERATIONS OR NEW CONSTRUCTION.

LEGEND

**WATER VALVE** 

FIRE HYDRANT

FIELD LOCATED TREE

**EXISTING TREE** 

TREE TO BE REMOVED

**EXISTING VEGETATION** 

**EXISTING VEGETATION TO BE REMOVED** 

**EXISTING TRAIL** 

SPOT ELEVATION

\_ - - EXISTING CONTOUR

Michael J. Mills FAIA

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Patricia M. O'Donnell FASLA

NJC - AS00707

Heritage Landscapes
Preservation Landscape Architects & Planners
Charlotte, Vermons & Norwalk, Connecticus

Princeton, NJ 08540

www.msarchitectsllc.com Project Name & Address

T: 609.681.2480

Rogers House Constructed

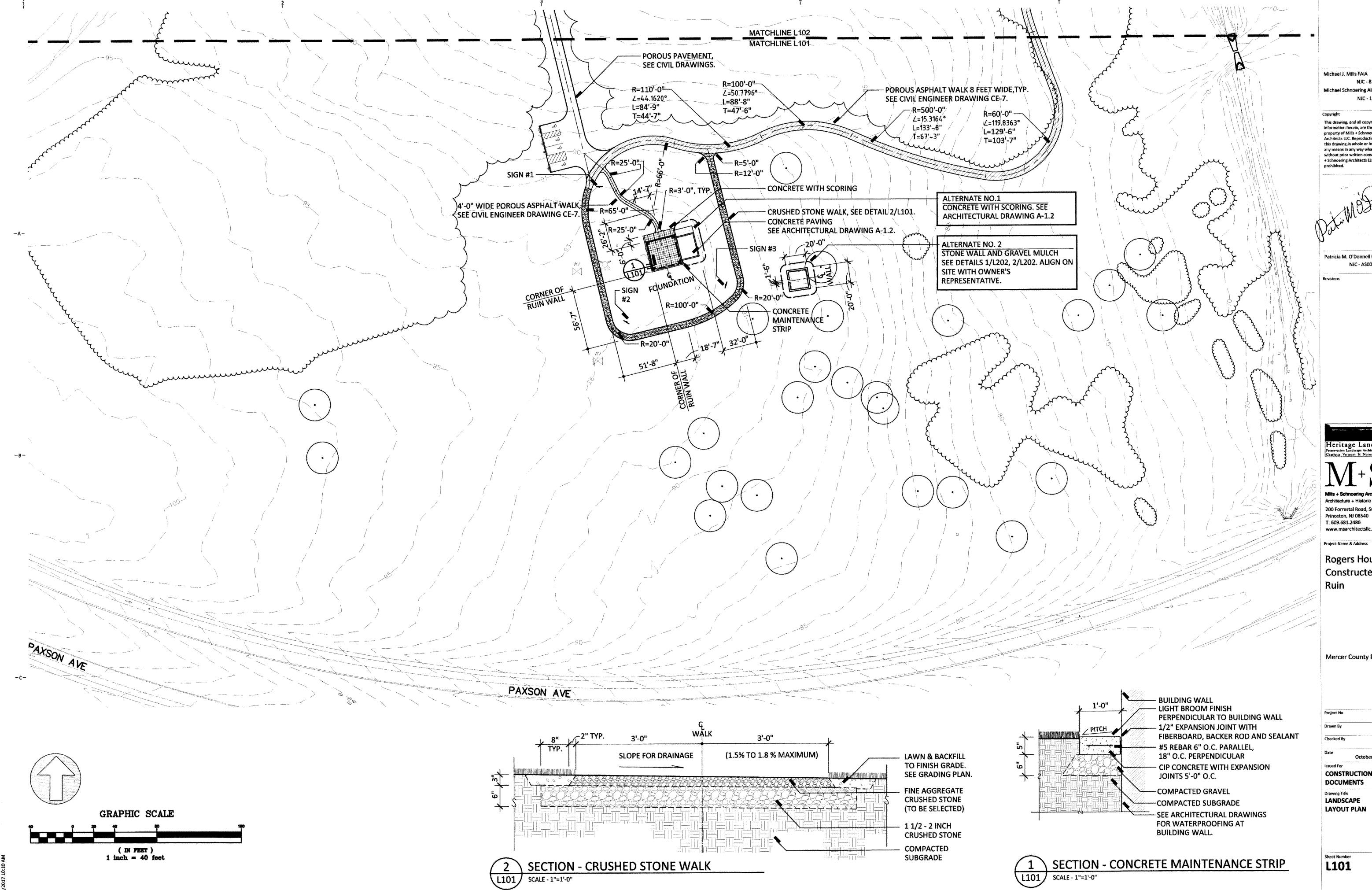
Mercer County Park

CONSTRUCTION

**DOCUMENTS** Drawing Title LANDSCAPE

**REMOVALS** PLAN

L001



Michael J. Mills FAIA NJC - 8207

Michael Schnoering AIA

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**Rogers House** Constructed

**Mercer County Park** 

CONSTRUCTION **DOCUMENTS** 

LAYOUT PLAN

— R=50'-0'' — R=3'-0'', TYP. - R=200'-0" ۷=11.4171° L=39'-10" T=20'-0" WALK 4'-0" R=650'-0" \( \alpha = 20.0690''\)
\( L=227'-8''\)
\( T=115'-0''\) R=15'-0" R=3'-0", TYP. minimin R=500'-0" ∠=15.6017 L=136'-2" FR=40'-0" - ASPHALT PAVEMENT SEE CIVIL DRAWINGS. T=68'-6" R=165'-0" ∠**=49.1606** R=3'-0"/ TYP. L=141'-7" T=85'-6" Δ=37.2260 L=52'-0" T=26'-11" R=60'-0" ∠=79.1151° L=82'-10" T=49'-7" POROUS ASPHALT WALK — 8 FEET WIDE, TYP. SEE/CIVIL ENGINEER DRAWING CE-7. R=160'-0"-∠=36.5746° L=102'-2" T=52'-11" MATCHLINE L102

MATCHLINE L101 GRAPHIC SCALE المراجع المراجع

- A -

~ C ~

(IN FEET)
1 inch = 40 feet

Michael J. Mills FAIA

Michael Schnoering AIA

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Project Name & Address

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Rogers House Constructed Ruin

Mercer County Park

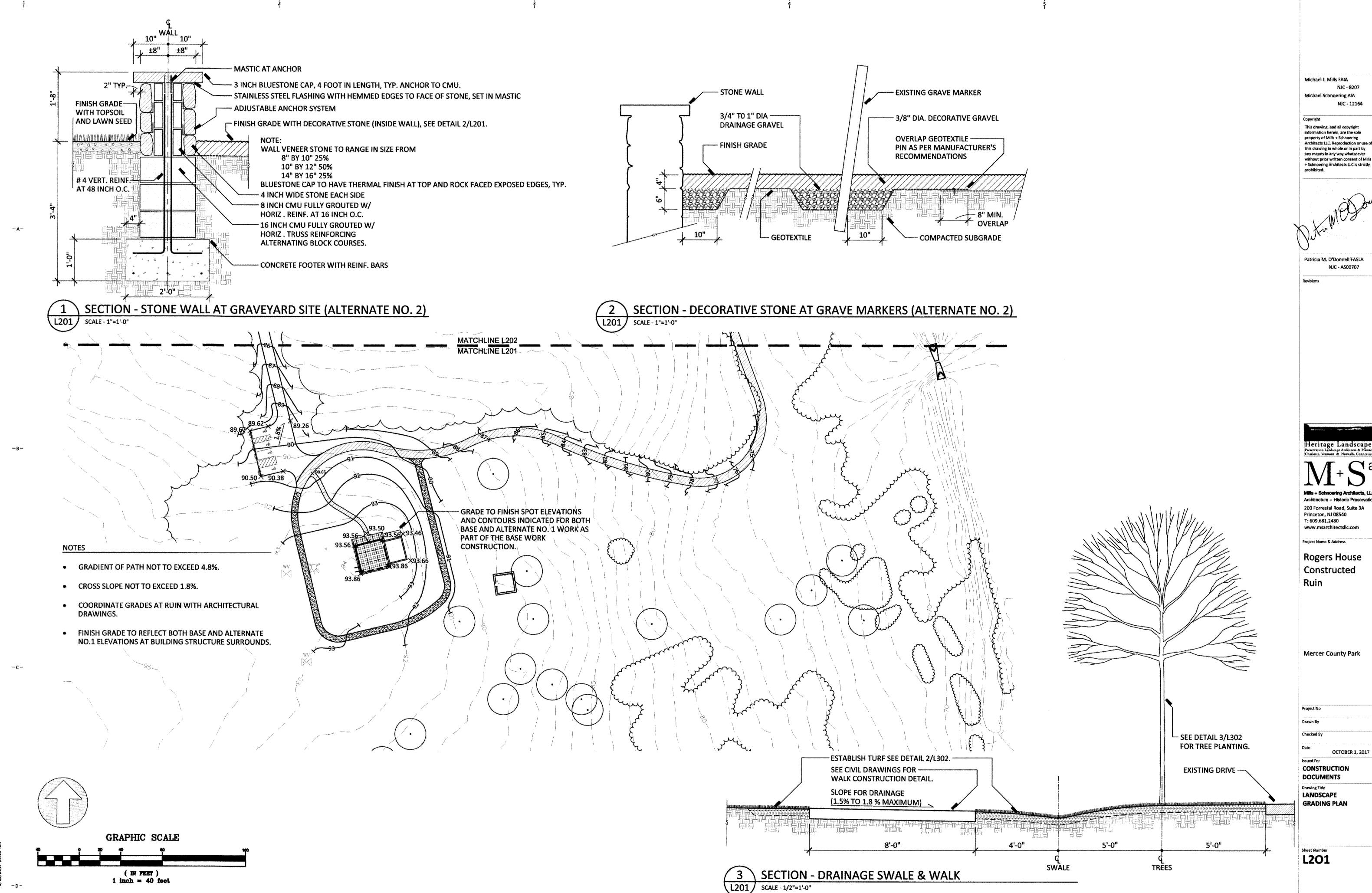
CONSTRUCTION

DOCUMENTS Drawing Title

LANDSCAPE

LAYOUT PLAN

Sheet Number



+ Schnoering Architects LLC is strictly

Heritage Landscapes Preservation Landscape Architects & Planners Charlotte, Vermont & Norwalk, Connecticut

B-INLET H00D=78.11 GR=77.39 --(HOOD DISTURBED) INV.IN=74.39'(12"RCP) INV.OUT=74.39'(12"RCP) A-/NLE/ OR=80.09 INV.OUT=75.84'(12"RCP) INLET TO RETAIN --A-NOTES GRADIENT OF PATH NOT TO EXCEED 4.8%. • CROSS SLOPE NOT TO EXCEED 1.8%. -B-MATCHLINE L202 MATCHLINE L201 GRAPHIC SCALE

( IN FEET ) 1 inch = 40 feet

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Project Name & Address

Rogers House Constructed Ruin

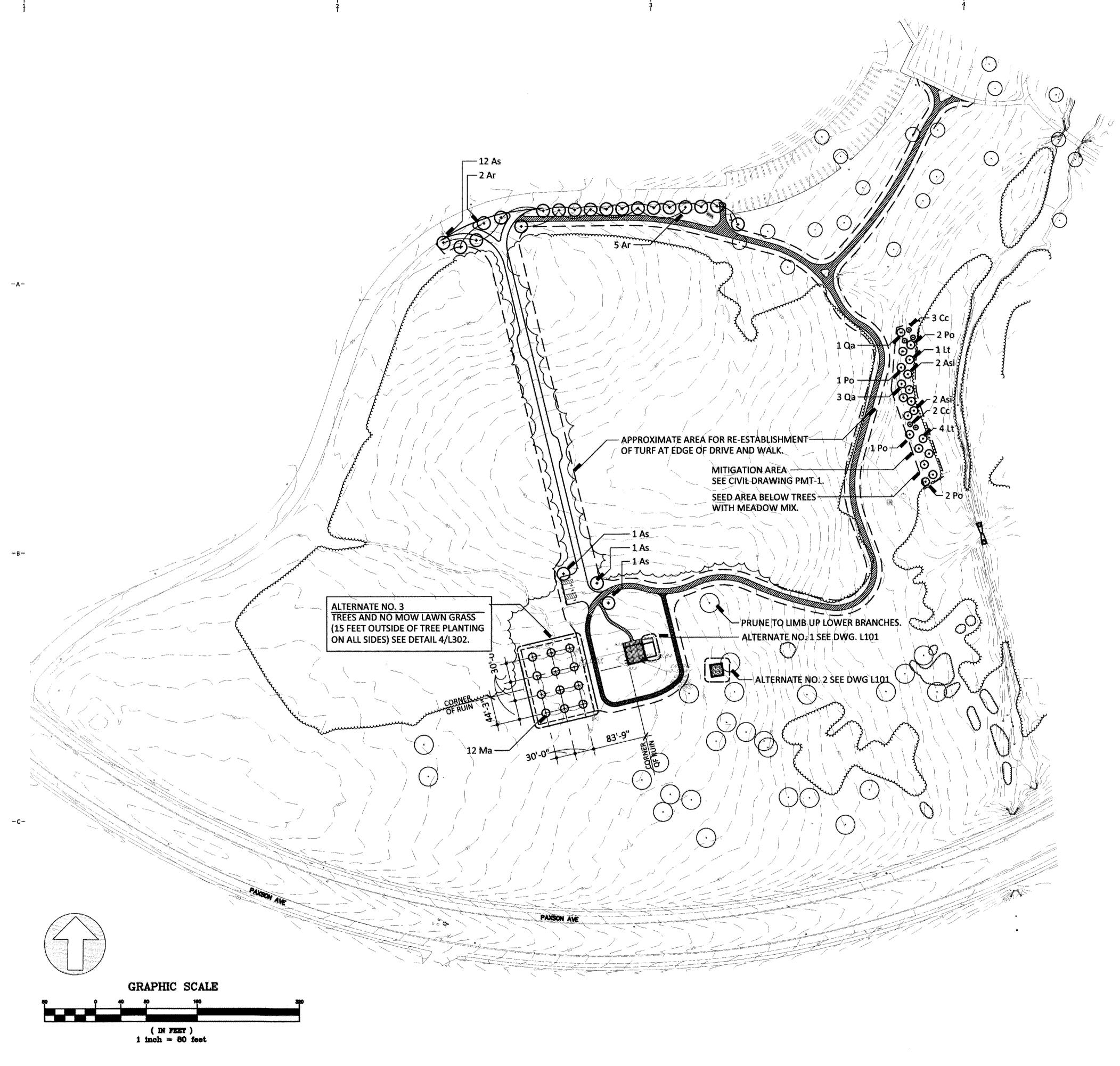
Mercer County Park

CONSTRUCTION DOCUMENTS

Drawing Title

LANDSCAPE GRADING PLAN

Sheet Number



**GENERAL NOTES PLANTING** 

1. LANDSCAPE CONTRACTOR TO REVIEW CONDITIONS ON SITE IN ADVANCE OF PLANTING OPERATIONS AND NOTIFY THE PROJECT MANAGER AND OWNERS REPRESENTATIVE IN WRITING OF DEFICIENCIES IN SITE PREPARATION THAT WILL ADVERSELY AFFECT PLANTING OPERATIONS AND ESTABLISHMENT OF HEALTHY PLANT MATERIALS.

2. TREES AND SHRUBS TO BE LOCATED ON SITE AND APPROVED BY THE OWNERS REPRESENTATIVE. MATERIALS TO BE ADJUSTED AS REQUESTED BY THE OWNER'S REPRESENTATIVE.

3. REVIEW CIVIL ENGINEERING DRAWING (PMT-1) FOR COORDINATION OF PLANTINGS WITHIN THE PROPOSED MITIGATION AREA. NOTIFY PROJECT MANAGER AND OWNERS REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN THE PLANTING AND LANDSCAPE INSTALLATION WORK BETWEEN THE TWO DRAWINGS. DO NOT PROCEED WITH LANDSCAPE INSTALLATION WITHOUT CLARIFICATION AND DIRECTION PROVIDED IN WRITING.

4. INSTALL PROTECTIVE TREE SLEEVES AND/OR PROTECTIVE NETTING ON INDIVIDUAL TREES TO PROTECT TREES FROM DEER RUB.

5. PLANT MATERIALS IN THE RIPARIAN ZONE MITIGATION AREA (S) INSTALLED AS PART OF THIS CONTRACT WORK ARE TO BE MONITORED AND MAINTAINED FOR NOT LESS THAT THREE GROWING SEASONS. PLANTINGS DETERMINED TO BE FAILING OR DEAD BY THE OWNER'S REPRESENTATIVE OR OWNER SHALL BE REPLACED AS PER THE CONTRACTS SIZE AND SPECIES.

6. MEADOW SEEDINGS ARE TO BE MAINTAINED FOR THREE GROWING SEASONS TO AVOID INVASIVE SPECIES COLONIZATION WITHIN THE MITIGATION AREA. WEED TO REMOVE INVASIVE SPECIES ESTABLISHMENT AND RESEED AS NECESSARY TO MAINTAIN A HEALTHY MEADOW AREA.

7. NO-MOW/LOW GROW SEEDING AREA BELOW THE ORCHARD AND ALONG THE DRIVE IS TO BE MAINTAINED FOR THREE GROWING SEASONS TO AVOID INVASIVE SPECIES COLONIZATION. WEED TO REMOVE INVASIVE SPECIES ESTABLISHMENT AND RE-SEED AS NECESSARY TO MAINTAIN A HEALTHY NO-MOW/LOW-GROW AREA.

8. PROVIDE INSPECTION REPORTS FOR MONITORING OF THE MITIGATION AREA PLANTING TO THE OWNERS'S REPRESENTATIVE AND OWNER FOR THE DURATION OF THE MONITORING AND MAINTENANCE PERIOD.

9. REFER TO TECHNICAL SPECIFICATIONS SECTIONS 32 9200 LAWNS AND 32 9300 PLANTS FOR INSTRUCTION ON THE PURCHASE, INSTALLATION, MANAGEMENT AND MAINTENANCE FOR PLANTING OF TREES, SHRUBS, GROUNDCOVERS, HERBACEOUS MATERIALS, LAWNS AND **MEADOW GRASS.** 

PLANT LIST SIZE NOTES COMMON NAME QTY CODE SCIENTIFIC NAME 1 1/2 - 2" CAL. Ar Acer rubrum Red Maple 1 1/2 - 2" CAL. Sugar Maple Acer saccharum 1-1 1/2" CAL. Acer saccharinum Silver Maple 1-1 1/2" CAL. B&B Cercis canadensis Eastern Redbud 1-1 1/2" CAL. Liriodendron tulipifera **Tuliptree Poplar** 1-1 1/2" CAL. Platanus occidentalis **American Sycamore** 1-1 1/2" CAL. Quercus alba White Oak

**ALTERNATE NO. 3 PLANT LIST** 12 Ma Malus 'Professor Sprenger' Professor Sprenger Crab 1-1 1/2" CAL.

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Patricia M. O'Donnell FASLA

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Preservation Landscape Architects & Planners
Charlotte, Vermont & Notwalk, Connecticut

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Project Name & Address

**Rogers House** Constructed Ruin

Mercer County Park

CONSTRUCTION **DOCUMENTS** 

LANDSCAPE PLANTING PLAN

L301

**NOTES: (ORCHARD AND MITIGATION AREA SEEDING)**  REMOVE EXISTING TURF BY CHEMICAL METHODS APPLY 2 INCHES OF COMPOST ROTOTILL COMPOST INTO UPPER 6 INCHES OF SOIL IN DESIGNATED ORCHARD AREA AND MITIGATION AREA IN PREPARATION OF SEEDING OPERATIONS. NO MOW MIX FOR USE IN ORCHARD MITIGATION SEED MIX FOR USE IN MITIGATION SEED WITH NO MOW TURF MIX -FINE GRADE AND LIGHTLY-COMPACT TO FINISH GRADE - SEE DETAIL 3/L302 SEE NOTES. FOR TREE PLANTING **EXISTING TURF DETAIL SECTION.** COMPOST— 15'-0" (SEE PLAN) SECTION - NO MOW TURF AT ORCHARD AND MEADOW MIX AT MITIGATION AREA L302 SCALE - 1/2"=1'=0"

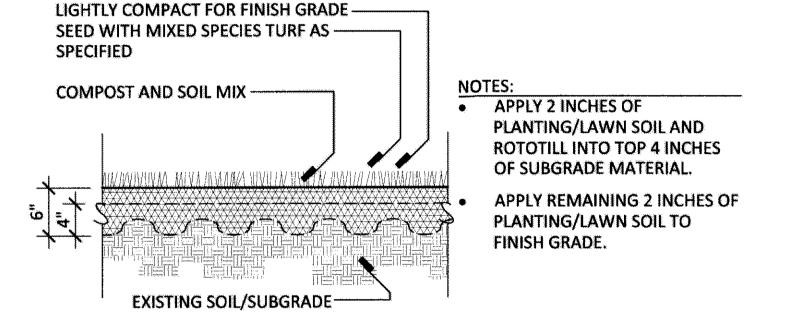
-A-

-c-

LIGHTLY COMPACT FOR FINISH GRADE -SEED WITH MIXED SPECIES TURF AS -SPECIFIED NOTES: COMPOST AND SOIL MIX - APPLY 2 INCHES OF COMPOST **ROTOTILL UPPER 6 INCHES OF TOPSOIL IN PREPARATION OF SEEDING OPERATIONS** EXISTING SOIL/SUBGRADE-

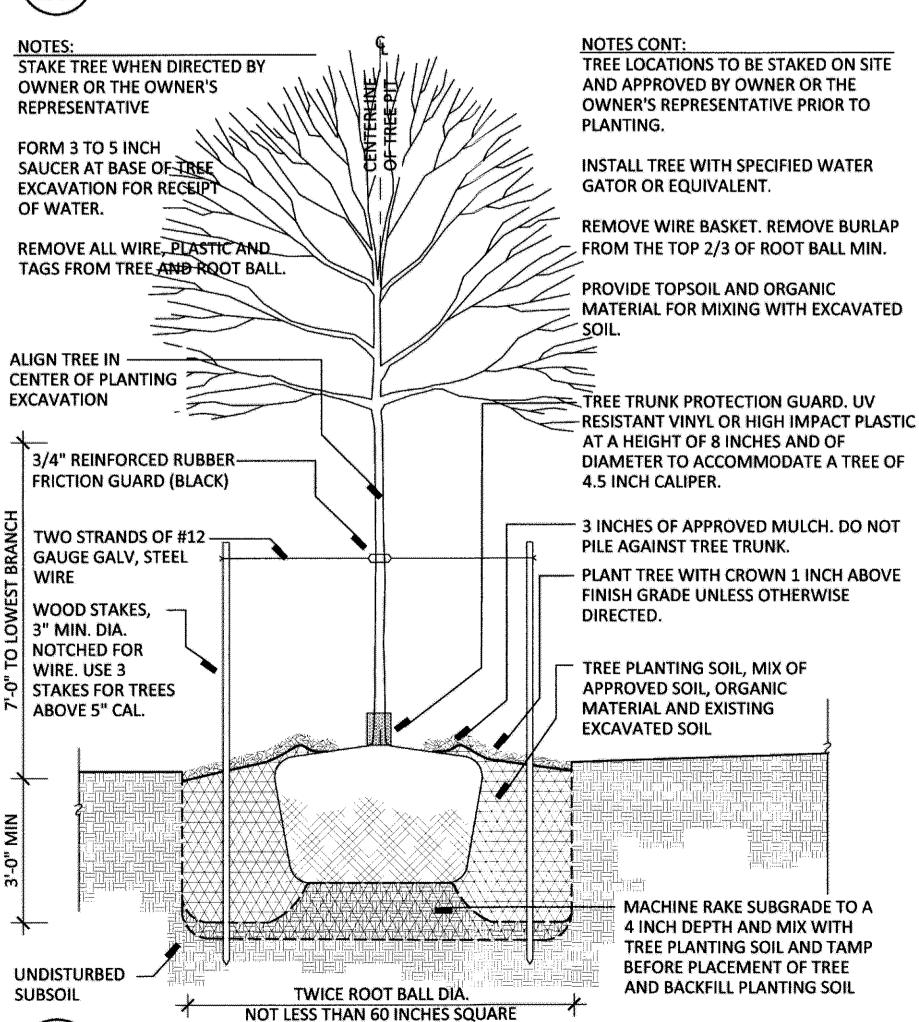
## **SECTION - TURF REESTABLISHMENT IN AREAS** DISTURBED BY CONSTRUCTION L302

SCALE - NOT TO SCALE



## **SECTION - TURF ESTABLISHMENT IN AREAS** OF REGRADING OR SOIL DISTURBANCE

(L302) SCALE - NOT TO SCALE



**SECTION - TREE PLANTING** 

SCALE - NOT TO SCALE

(L302)

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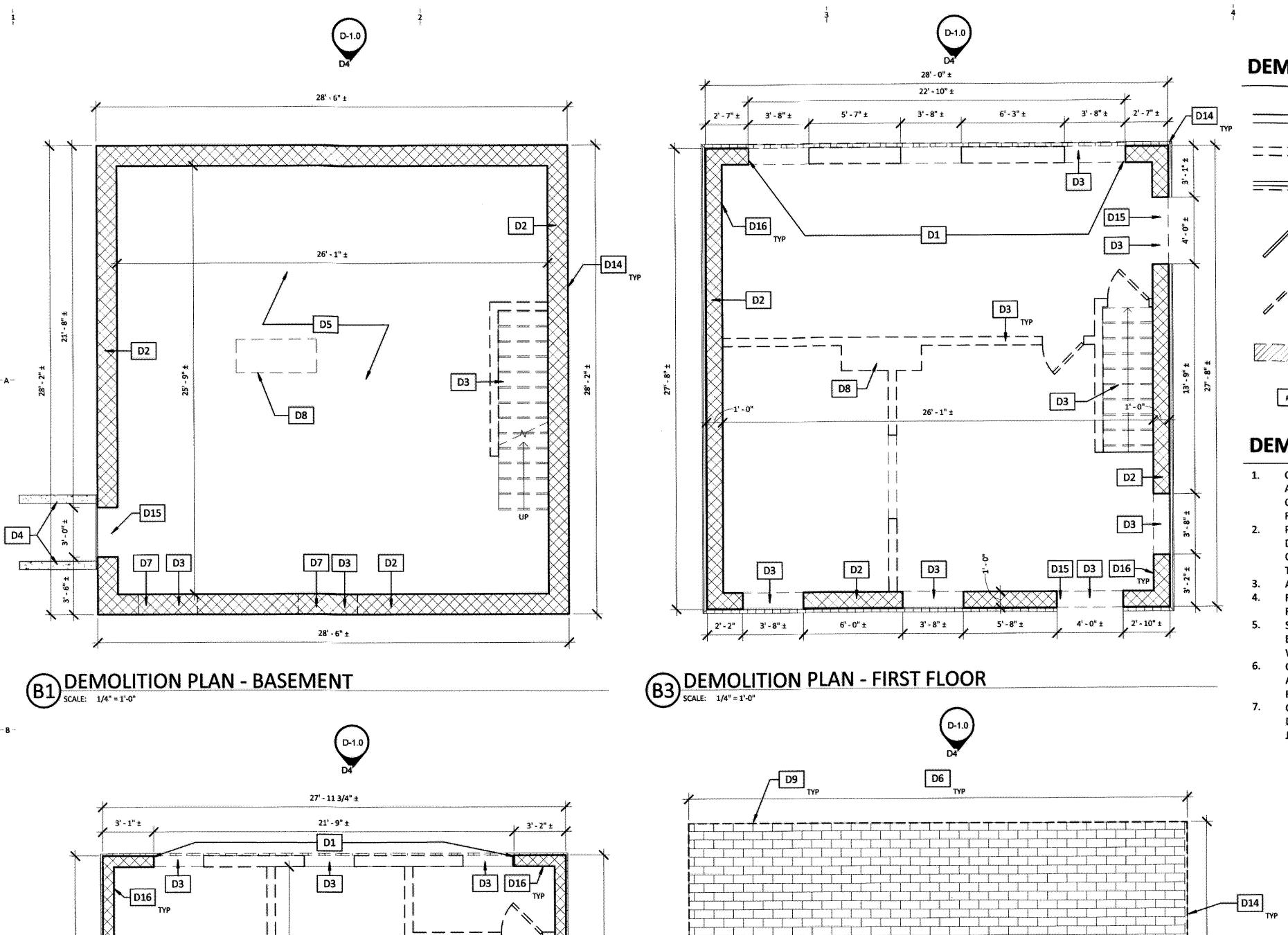
**Mercer County Park** 

**OCTOBER 1, 2017** 

CONSTRUCTION **DOCUMENTS** 

LANDSCAPE **PLANTING** DETAILS

L302



**DEMOLITION FLOOR PLAN LEGEND** 

EXISTING WALL TO REMAIN

EXISTING WALL TO BE REMOVED

PARTIAL DEMOLITION OF WALL, SEE DEMOLITION NOTES

EXISTING DOOR TO REMAIN

EXISTING DOOR TO BE REMOVED

GENERAL AREA OF DEMOLITION, SEE
DEMOLITION NOTES FOR MORE INFORMATION

## KEYNOTE TAG

## **DEMOLITION GENERAL NOTES**

- 1. CONTRACTOR TO VERIFY ALL CONDITIONS IN FIELD PRIOR TO DEMOLITION AND TO CORRDINATE ALL DEMOLITION ACTIVITIES WITH INTENDED CONSTRUCTION. REPORT ALL DISCREPANCIES TO ARCHITECT FOR RESOLUTION.
- 2. PROTECT ALL CONSTRUCTION TO REMAIN FROM DAMAGE DURING DEMOLITION OF ADJACENT CONSTRUCTION. REPAIR/REPLACE CONSTRUCTION TO REMAIN DAMAGED DURING DEMOLITION TO MATCH THE QUALITY OF THE NEW WORK.
- ALL DEMOLITION WORK WILL BE DONE WITH HAND TOOLS.
   REVIEW RELOCATION OF EXISTING ELECTRICAL SWITCHES, OUTLETS, FIXTURES (IF ANY) WITH ARCHITECT PRIOR TO DEMOLITION.
- 5. SALVAGED ITEMS TO BE REINSTALLED IN CONJUCTION WITH NEW WORK TO BE STORED IN A SAFE, SECURE, AND DRY LOCATION AND TO NOT INTERFERE
- WITH OCCUPANT EGRESS, ACTIVITIES, OR SPACE REQUIREMENTS.
   CONTRACTOR TO DISPOSE OF DEMOLISHED MATERIALS OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- 7. CONTRACTOR SHALL PROVIDE <u>SIGNED AND SEALED</u> ENGINEERED DEMOLITION DOCUMENTS. CONTRACTOR'S ENGINEER SHALL BE A NEW JERSEY LICENSED ENGINEER.

## **DEMOLITION KEYNOTES**

- D1 REMOVE EXISTING WALL FROM BELOW GRADE TO FULL HEIGHT, AT WIDTH INDICATED, ALL EXISTING BRICK IS TO BE SALVAGED AND STORED FOR REUSE.
- TEMPORARY SHORING WILL BE REQUIRED TO HOLD THE REMAINING THREE BRICK WALLS IN PLACE
- ALL WOOD COMPONENTS OF THE BUILDING SHALL BE REMOVED INCLUDING FRAMING, WINDOWS, DOORS, LINTELS, FURRING, FLOORING, STAIRS, MISCELLANEOUS LUMBER, INTERIOR PARTITIONS, AND TRIM.
- **D4** EXISTING RETAINING WALLS TO REMAIN
- D5 ALL EQUIPMENT SHALL BE REMOVED INCLUDING PIPING, WIRING AND ALL ASSOCIATED MATERIALS
- D6 REMOVE EXISTING ROOFING, FRAMING, TRIM, GUTTERS AND ALL
- ASSOCIATED MATERIAL IN THEIR ENTIRETY

  D7 EXISTING ARCHED MASONRY OPENINGS ABOVE
- REMOVE EXISTING MASONRY CHIMNEY
- D9 REMOVE EXISTING CORNICE IN ITS ENTIRETY
- DA KEMIOAE EXISTING COMMICE IN ITS ENTINETY
- D10 DEMOLITION EXTENT: ALIGN WITH EXISTING WINDOW JAMB
- D11 DEMOLITION EXTENT: ALIGN WITH EXISTING WINDOW HEAD
- OUTLINE OF EXISTING MASONRY OPENINGS IN REMOVED WALL

WITH CONTRACTOR'S DEMOLITION ENGINEER.

- D13 REMOVE WALL TO 1'-0" BELOW NEW PAVING ELEVATION

  D14 REMOVE EXISTING BRACING IN ITS ENTIRETY, INCLUDING LUMBER,
  FASTENERS, CONNECTIONS, AND FOOTINGS. COORDINATE REMOVAL
- PEOURED REMOVE EXISTING WOOD LINTELS. PROVIDE TEMPORARY SHORING AS
- D16 REMOVE ALL EXISTING PLASTER AND FURRING TO EXISTING MASONRY.

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Project Name & Address

ROGERS
HOUSE
CONSTRUCTED
RUIN

MERCER COUNTY
MERCER COUNTY PARK

Project No
1507
Drawn By
IE
Checked By
MV
Date
OCTOBER 1, 2017
Issued For
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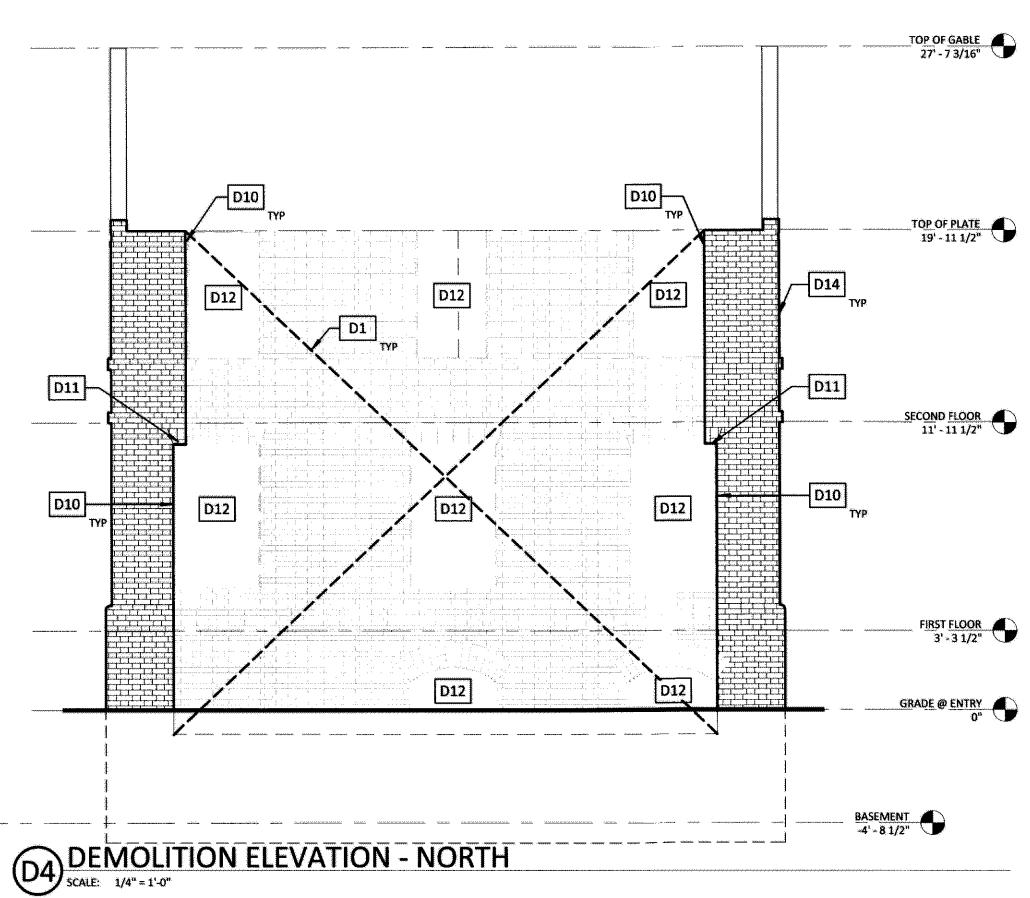
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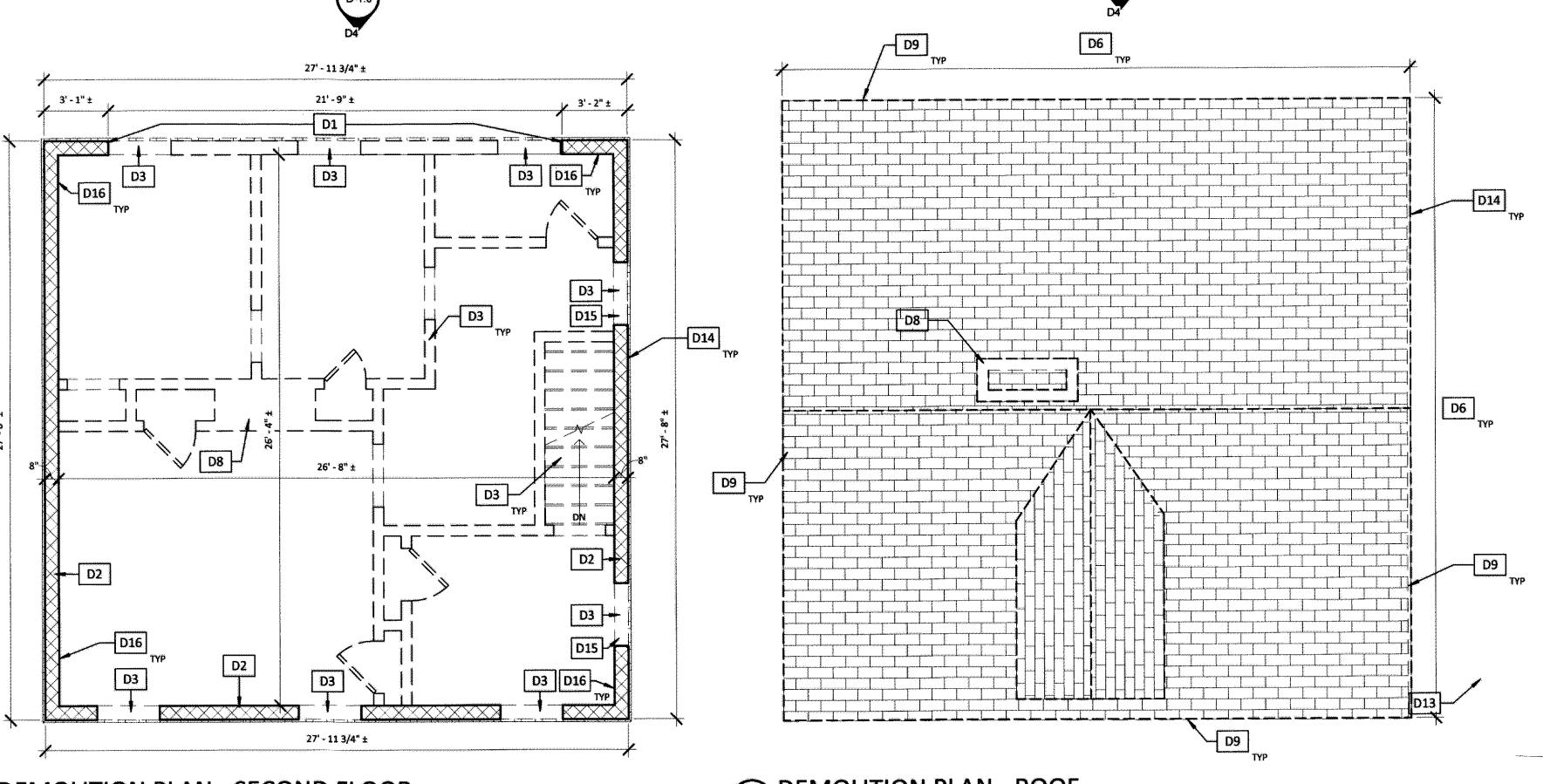
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D1 DEMOLITION PLAN - SECOND FLOOR

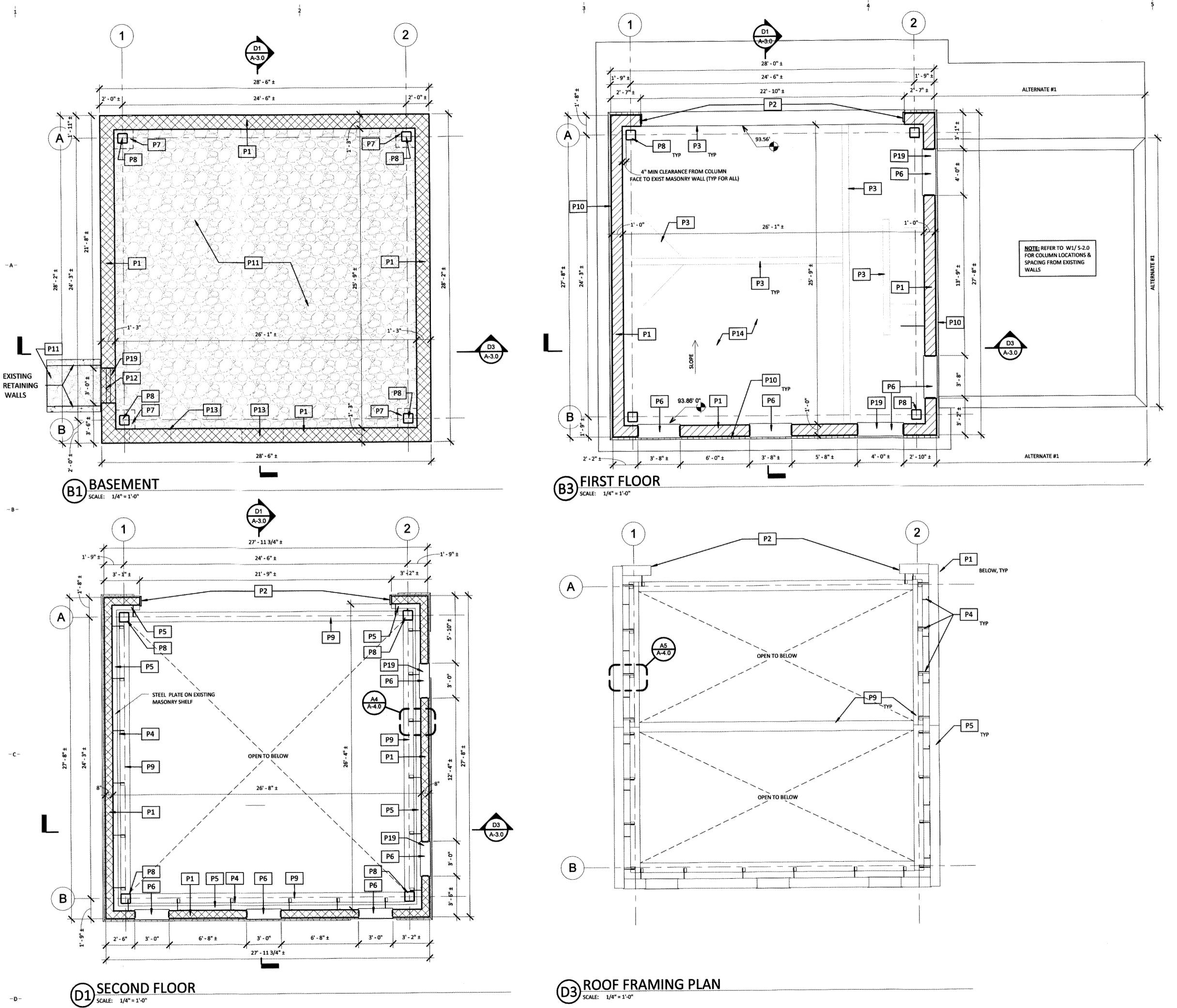
SCALE: 1/4" = 1'-0"

D3 DEMOLITION PLAN - ROOF
SCALE: 1/4" = 1'-0"

D-1.0

FLOOR PLANS

**DEMOLITION** 



## FLOOR PLAN LEGEND

EXIST

EXIST MASONRY WALL

(x)

- EJ -- --

EXPANSION JOINT

**COLUMN LINE** 

ALT ## ALT ##

ALTERNATE KEYNOTE

[##] [##]<sub>TY</sub>

KEYNOTE TAG

## **GENERAL FLOOR PLAN NOTES**

- 1. ALL DIMENSIONS TO FINISHED FACE OF CONSTRUCTION, UNLESS OTHERWISE NOTED.
- 2. CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD. REPORT ALL DISCREPANCIES IN THESE DRAWINGS AND RELATED SPECIFICATIONS TO ARCHITECT FOR RESOLUTION PRIOR TO START OF CONSTRUCTION. FAILURE TO VERIFY ALL CONDITIONS AFFECTING THE WORK AND FAILURE TO REPORT DISCREPANCIES WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE COORDINATION OF ALL ASPECTS OF THE WORK.
- 3. ALL MATERIAL TO REMAIN IS TO BE PROTECTED DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE.
- 4. REFER TO SPECIFICATIONS AND ALL TRADE DRAWINGS FOR ADDITIONAL INFORMATION.
- 5. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SUPPORT AND SHORING.

## PLAN KEYNOTES

- P1 EXISTING MASONRY WALL
- P2 NEW OPENING IN EXISTING MASONRY WALL w/ STEEL PLATE OR STEEL TUBE COVER AT NEWLY EXPOSED EDGES
- P3 STAMPED CONCRETE ACCENT, FLUSH w/ ADJACENT. REFER TO A-1.2.
- P4 STEEL CONNECTION TO EXISTING MASONRY WALL, REFER TO STRUCTURAL.
- STRUCTURAL.
- P5 STEEL PLATE ON EXISTING MASONRY SHELF
- P6 EXISTING MASONRY OPENING W/ STEEL PLATE INSERTS
- P7 CONCRETE PIER AND CONCRETE FOOTING BELOW, REFER TO STRUCTURAL.
- P8 STEEL COLUMNS, REFER TO STRUCTURAL
- P9 STEEL BEAMS, REFER TO STRUCTURAL
- P10 EXISTING MASONRY SHELF BELOW
- P11 INFILL TO GRADE W/ COMPACTED FILL AS REQUIRED
- P12 EXISTING BASEMENT ACCESS OPENING: INFILL w/ SOLID 12" CMU, COVER w/ 1" CEMENT PARGING BOTH SIDES
- P13 EXISTING ARCHED MASONRY OPENINGS ABOVE W/STEEL PLATE INSERTS
- P14 STAMPED CONCRETE SLAB ON GRADE. REFER TO A-1.2. SLOPE AS INDICATED
- P15 STAMPED CONCRETE FIELD PATTERN
- P16 STAMPED CONCRETE ACCENT PATTERN #1 ORIGINAL WALL LOCATIONS
- P17 STAMPED CONCRETE ACCENT PATTERN #2 ORIGINAL CHIMNEY LOCATIONS
- P18 STAMPED CONCRETE ACCENT PATTERN #3 ORIGINAL STAIR LOCATION
- P19 NEW STEEL LINTEL. REFER TO STRUCTURAL.

## **ALTERNATES**

ALTERNATE #1
ALTERNATE #2
ALTERNATE #3

PATIO PAVING

CEMETERY WALL & DEMOLITION PEACH ORCHARD

CONSTRUCTED RUIN

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T: 609.681.2480

**ROGERS** 

HOUSE

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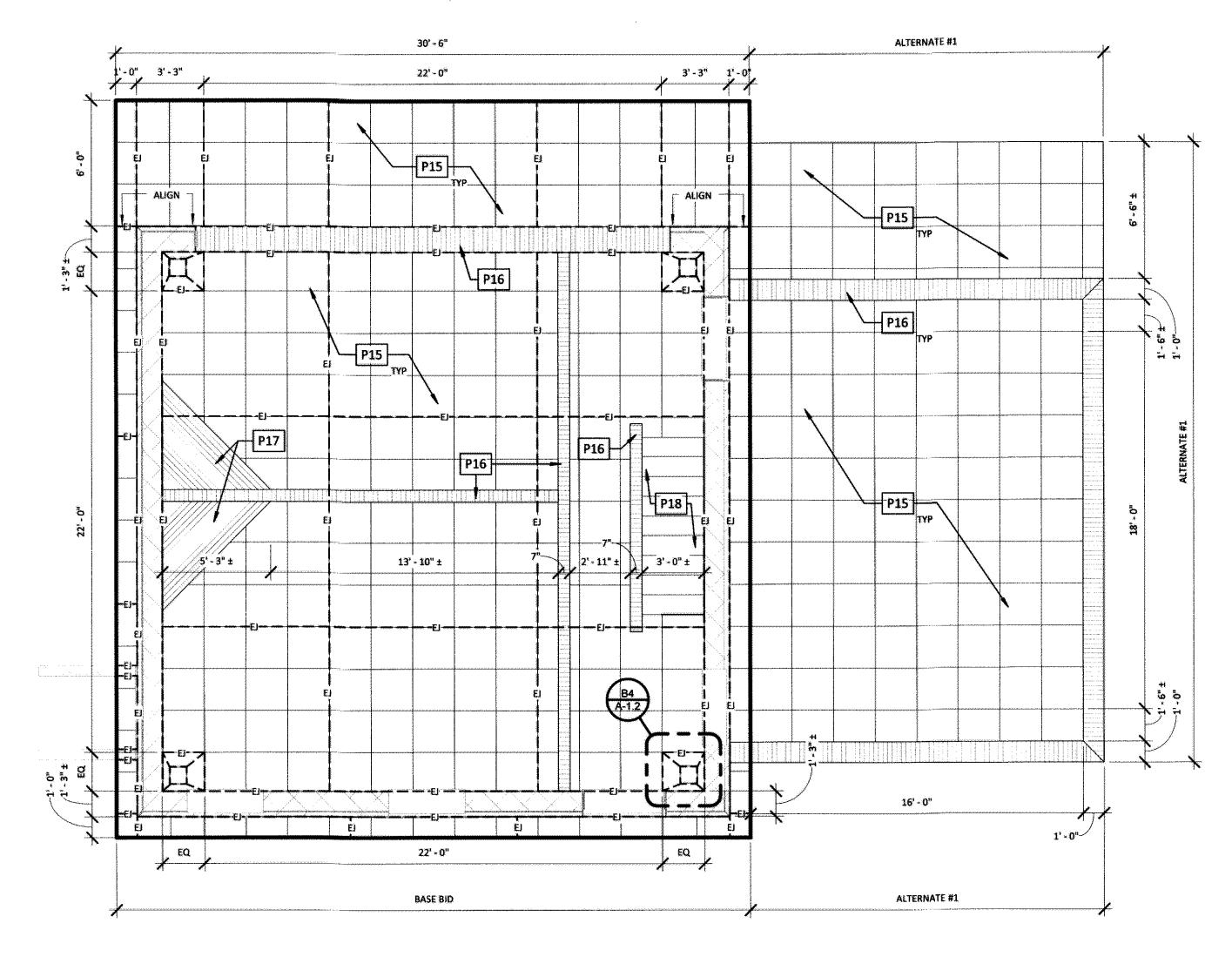
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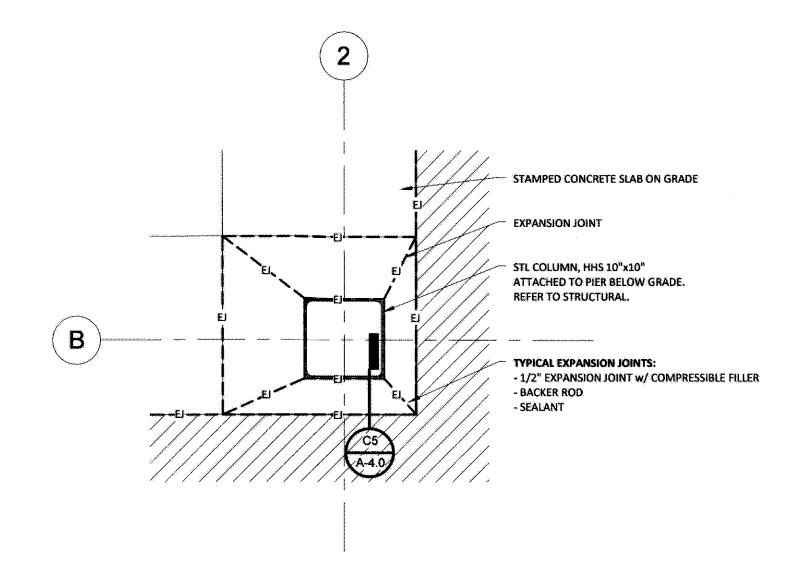
CONSTRUCTION DOCUMENTS

Drawing Title
FLOOR PLANS

Sheet Numbe

A-1.1





PAVING PLAN

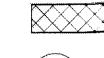
SCALE: 1/4" = 1'-0"

- C -

B4 PAVING DETAIL - STL COLUMN

SCALE: 1" = 1'-0"

## FLOOR PLAN LEGEND



**EXIST MASONRY WALL** 





**COLUMN LINE** 



----E)----

**EXPANSION JOINT** 

**ALTERNATE KEYNOTE** 

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**KEYNOTE TAG** 

## **GENERAL FLOOR PLAN NOTES**

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- P7 CONCRETE PIER AND CONCRETE FOOTING BELOW, REFER TO
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- P8 STEEL COLUMNS, REFER TO STRUCTURAL
- **P9** STEEL BEAMS, REFER TO STRUCTURAL
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- P19 NEW STEEL LINTEL. REFER TO STRUCTURAL.

## **ALTERNATES**

**ALTERNATE #1 ALTERNATE #2 ALTERNATE #3**  PATIO PAVING

**CEMETERY WALL & DEMOLITION** PEACH ORCHARD

**OCTOBER 1, 2017** 

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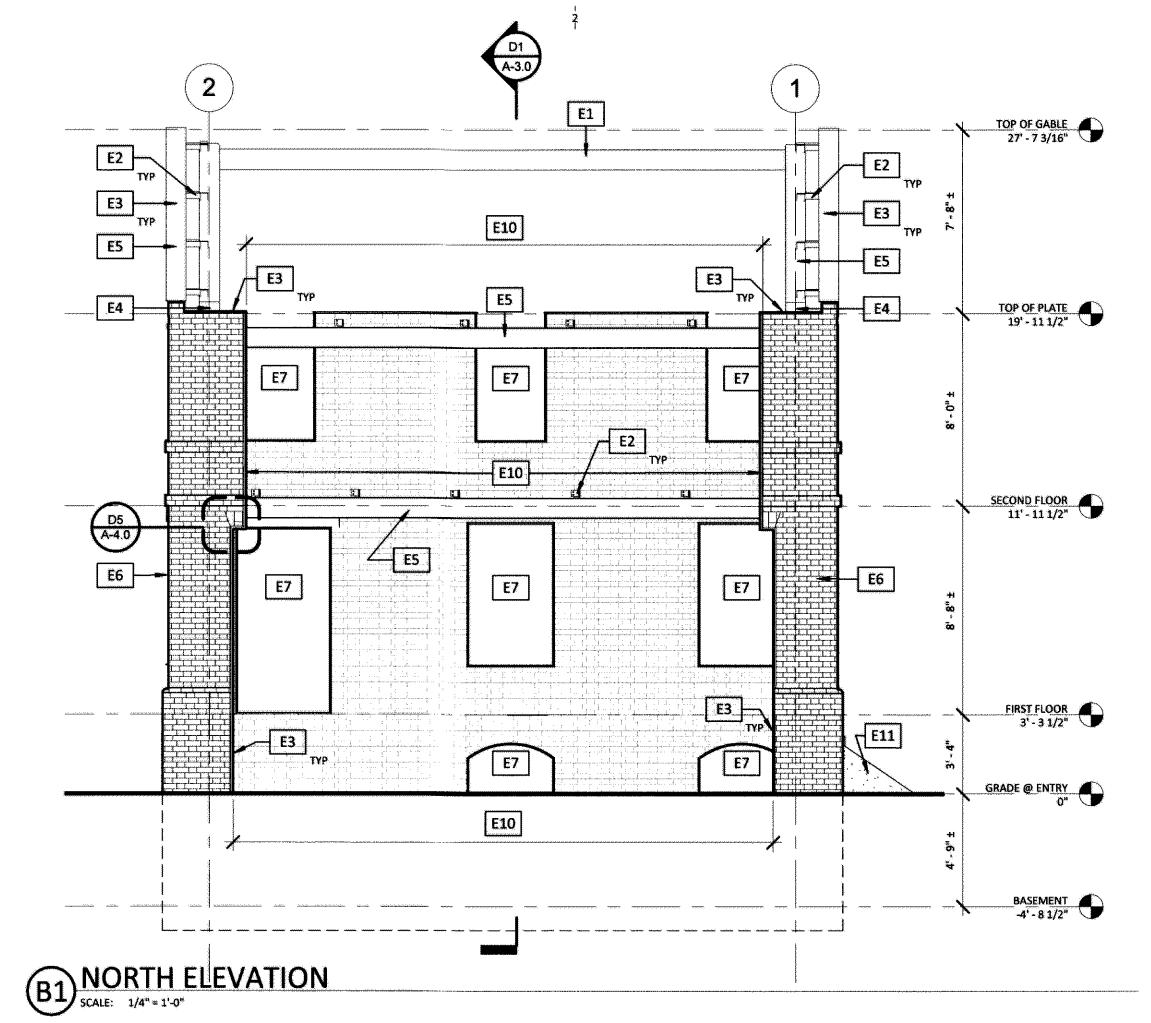
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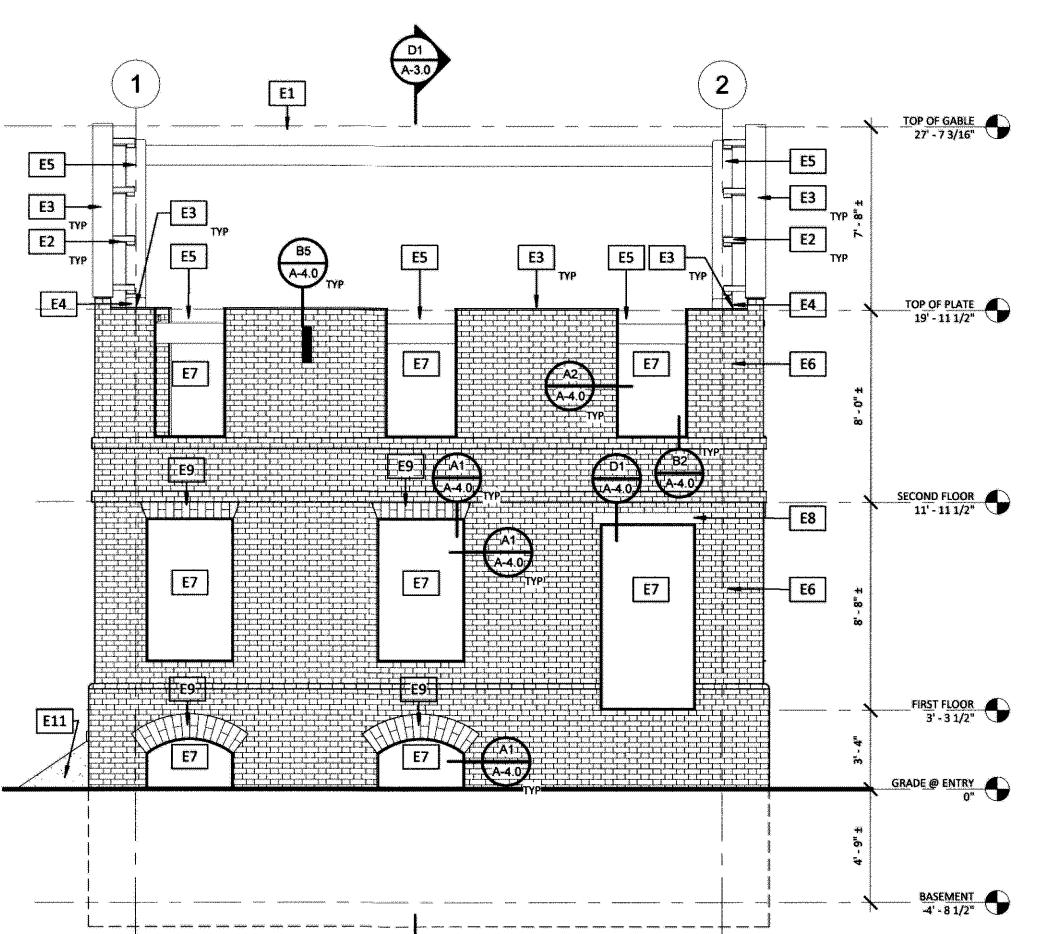
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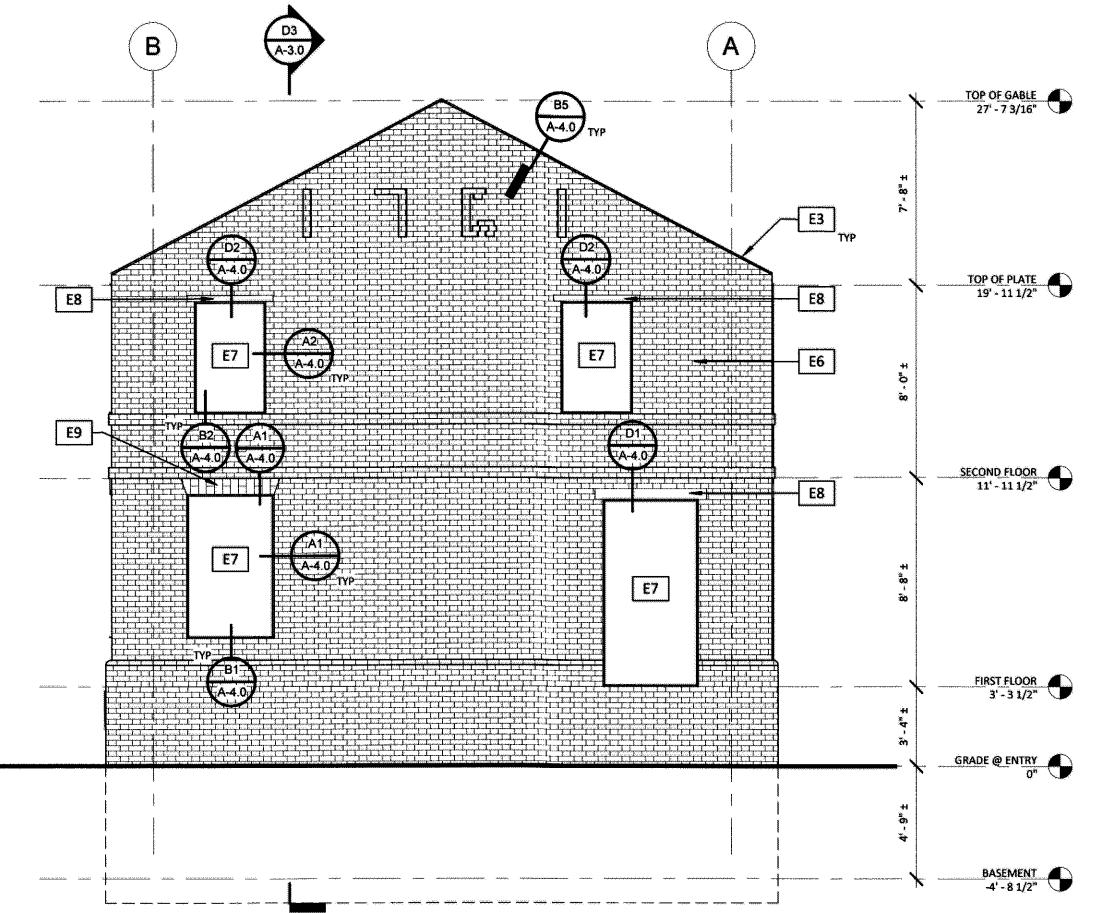
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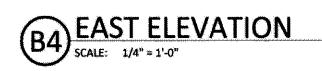


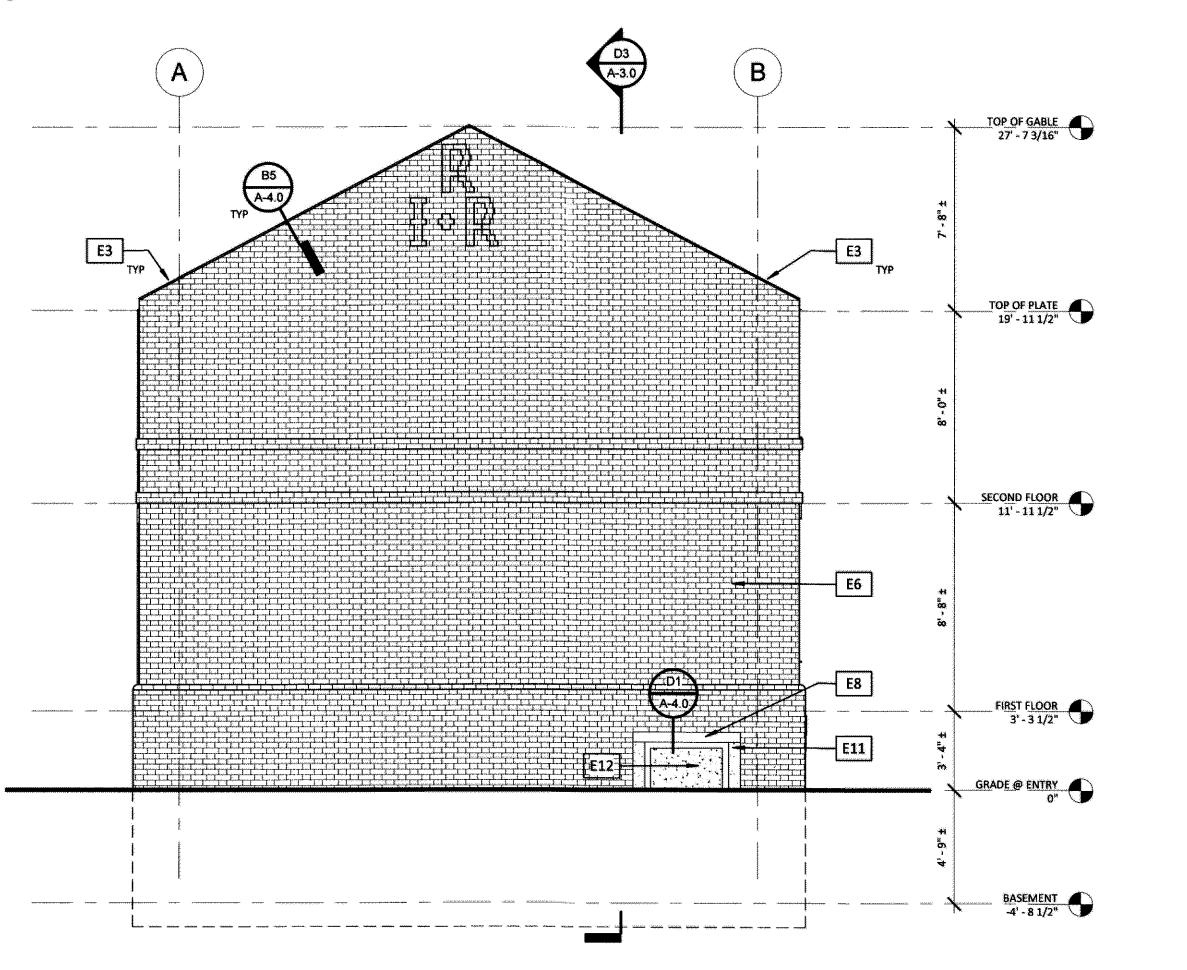


SOUTH ELEVATION

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







## **ELEVATION LEGEND**

**COLUMN LINE ALTERNATE KEYNOTE** 

> ## ##

**KEYNOTE TAG** 

## **ELEVATION KEYNOTES**

**E1** STEEL RIDGE BEAM, REFER TO STRUCTURAL STEEL CONNECTOR, REFER TO STRUCTURAL

STEEL PLATE WALL CAP

STEEL COLUMN, REFER TO STRUCTURAL

STEEL BEAM, REFER TO STRUCTURAL **EXISTING MASONRY WALL** 

EXISTING MASONRY OPENING W/ STEEL PLATE INSERTS.

STEEL PLATE SHALL BE BUTT JOINT AND FULLY WELDED AT EACH CORNER

E8 STEEL TUBE LINTEL

**NEW MASONRY OPENING** 

**EXISTING RETAINING WALL** 

E12 PARGING

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ROGERS HOUSE CONSTRUCTED

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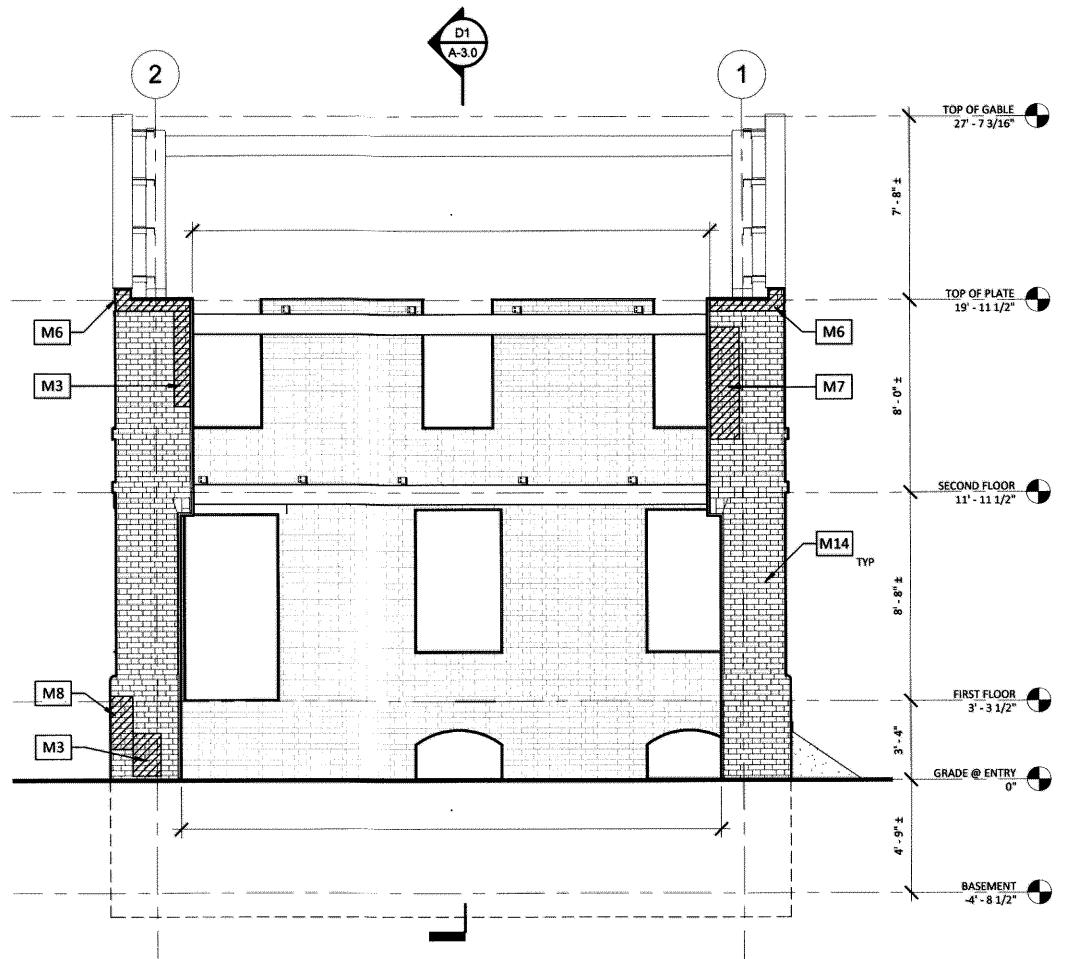
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**EXTERIOR ELEVATIONS** 

WEST ELEVATION

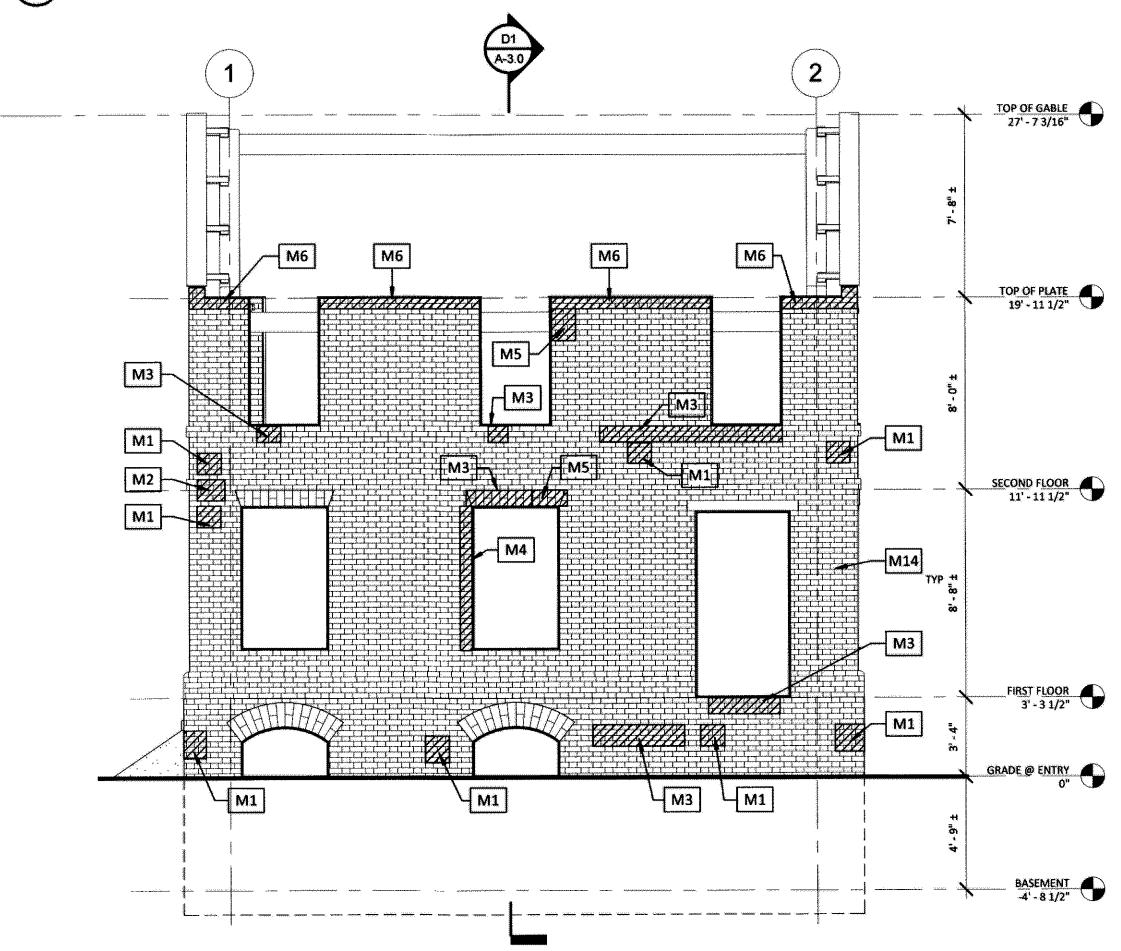
SCALE: 1/4" = 1'-0"

A-2.0



NORTH ELEVATION - MASONRY REPAIRS

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



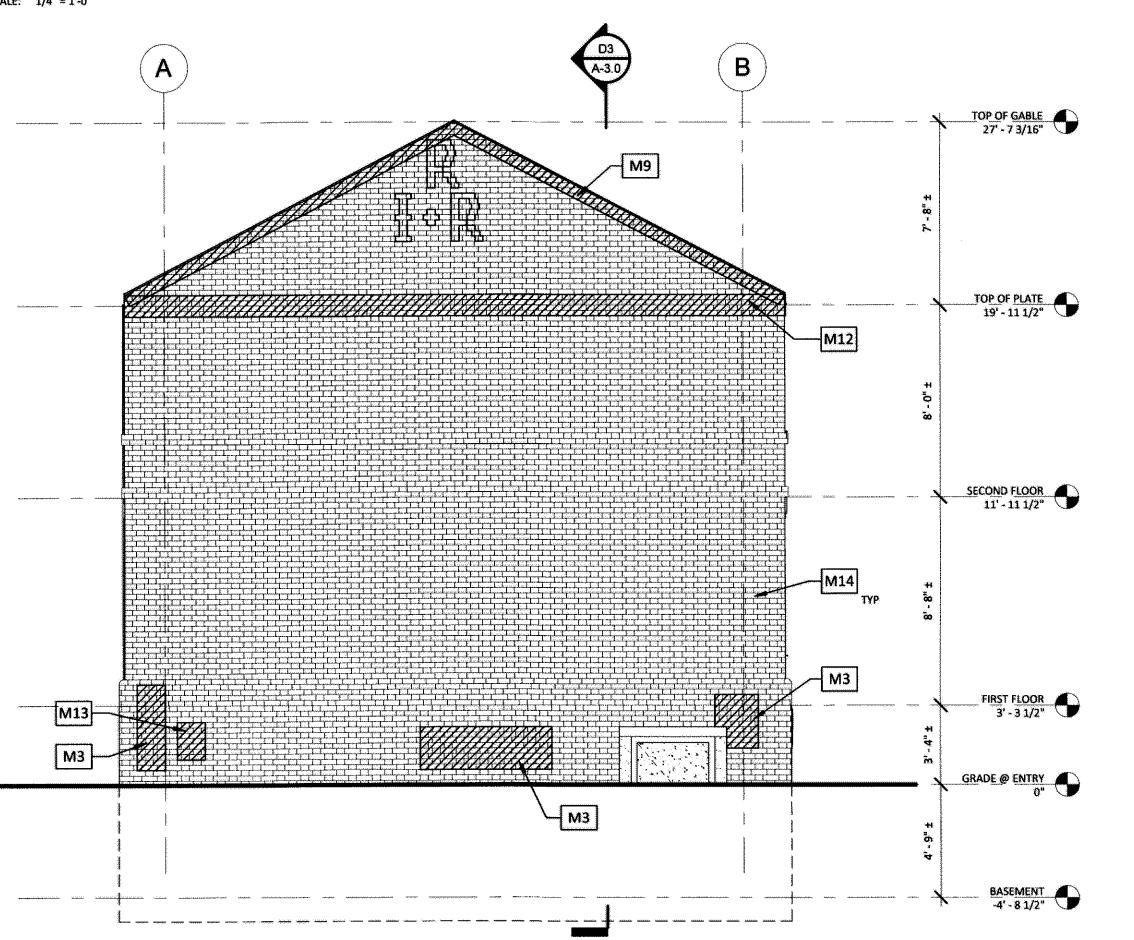
 $\left( \mathbf{B} \right)$ TOP OF GABLE 27' - 7 3/16" 19' - 11 1/2" 1M1 M7 / M1 SECOND FLOOR 11' - 11 1/2" /M11 \_\_ M8 FIRST FLOOR 3'-31/2" M1 -M13 **₩**5 M3 GRADE @ ENTRY

B4 EAST ELEVATION - MASONRY REPAIRS

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

WEST ELEVATION - MASONRY REPAIRS

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



**ELEVATION LEGEND** 

**COLUMN LINE** 



## **MASONRY REPAIR KEYNOTES**

REPLACE EXISTING BRICK w/ SALVAGED BRICK APROXIMATELY 12"x12"

REPOINT MORTAR TO MATCH EXISTING. EXISTING

REMOVE DAMAGED BRICK. REPLACE w/ SALVAGED BRICK.

BASEMENT -4' - 8 1/2"

APPROXIMATELY 12"x12"

AND PATCH w/ MORTAR AS REQUIRED FOR FLAT TOP OF SLOPED GABLE WALL.

OTHER NON-MASONRY ITEMS.

**REMOVE LOOSE MASONRY AND MORTAR AT JAMBS OF OPENING. REMOVE DAMAGED BRICK TO CREATE** 

CREATE FLAT, SMOOTH JAMBS.

REMOVE ALL PIPES. PATCH/REPAIR BRICK AS REQUIRED.

**GENERAL NOTE: REPOINT AND REPAIR ALL BRICK** 

##

KEYNOTE TAG

AREA OF REPAIR

DAMAGED BRICK TO REMAIN.

REPOINT MORTAR TO MATCH EXISTING

PATCH DAMAGED BRICK w/ MORTAR

REPLACE MISSING OR DAMAGED BRICK AS REQUIRED FOR

FLAT TOP OF WALL.

**REMOVE ALGAE** 

REPLACE MISSING BRICK w/ SALVAGED BRICK

REPLACE MISSING OR DAMAGED BRICK AS REQUIRED

**REMOVE EXISTING WOOD NAILERS, NAILS, AND ALL** 

TOOTHED OPENING. INFILL W/ SALVAGED BRICK TO

REPAIR/REPLACE/REPOINT BRICK AS REQUIRED AT REMOVED CORNICE

DAMAGED BY EXISTING BRACING.

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**ROGERS** HOUSE

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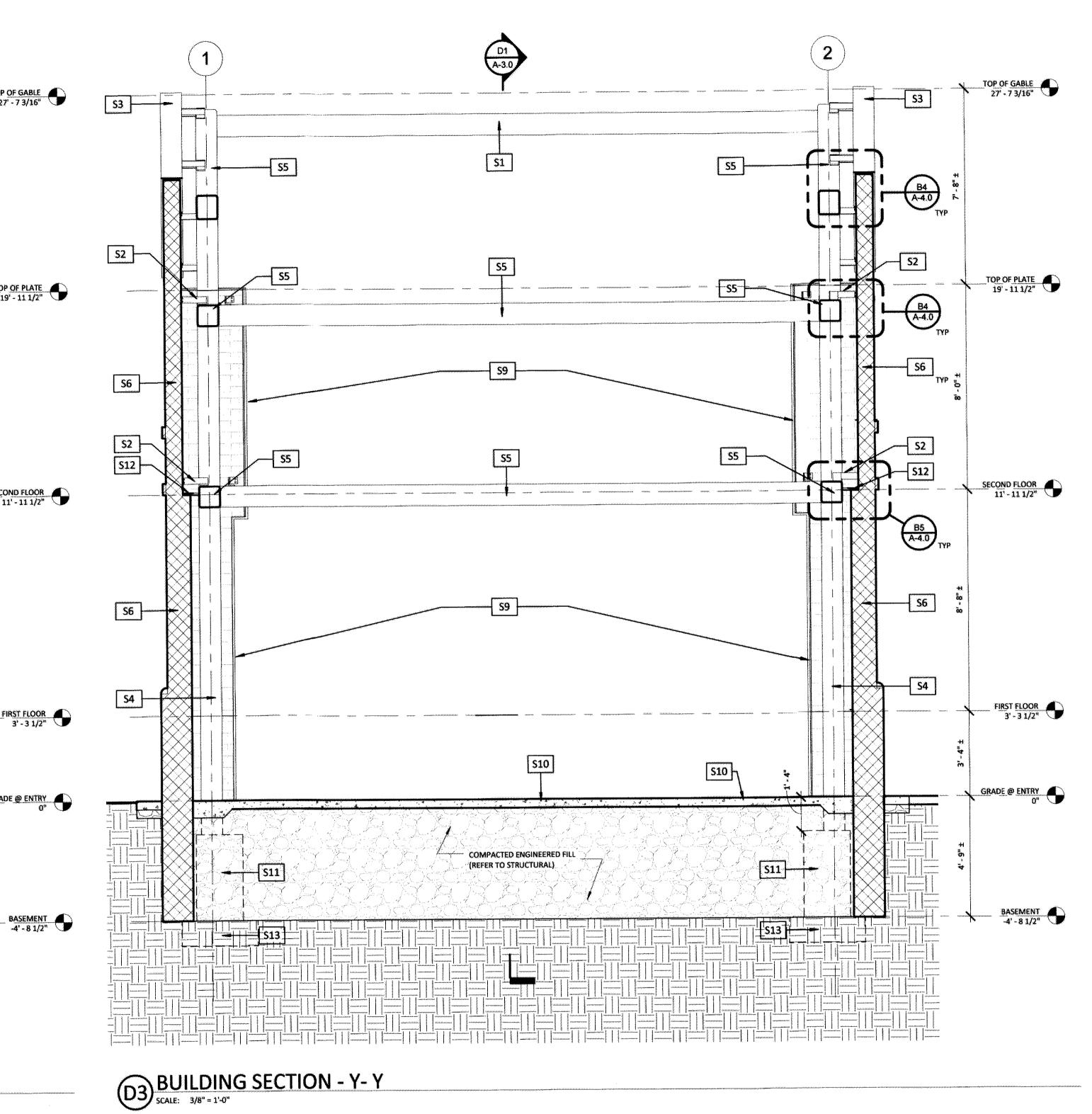
CONSTRUCTION

**DOCUMENTS** 

**EXTERIOR ELEVATIONS MASONRY REPAIRS** 

SOUTH ELEVATION - MASONRY REPAIRS

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



COMPACTED ENGINEERED FILL

(REFER TO STRUCTURAL)

57

**S7** 

**[511]** 

S10

S3 -

S9 —

**S4** —

S10

D1 BUILDING SECTION - X - X

SCALE: 3/8" = 1'-0"

**₩**58

**S7** 

## **SECTION LEGEND**

**COLUMN LINE** ALT ## ALTERNATE KEYNOTE

## ## **KEYNOTE TAG** 

**S1** STEEL RIDGE BEAM, REFER TO STRUCTURAL **S2** STEEL CONNECTOR, REFER TO STRUCTURAL

S3 STEEL PLATE WALL CAP

**SECTION KEYNOTES** 

**S4** STEEL COLUMN, REFER TO STRUCTURAL

**S5** STEEL BEAM, REFER TO STRUCTURAL

**\$6** EXISTING MASONRY WALL

**S7** EXISTING MASONRY OPENING W/ STEEL PLATE INSERTS

**S8** STEEL TUBE LINTEL

**S9** NEW MASONRY OPENING W/ STEEL PLATE CAP

STAMPED CONCRETE SLAB ON GRADE. REFER TO A-1.2 FOR PATTERN.

REFER TO STRUCTURAL FOR ADD'L INFO. S11 CONCRETE PIERS, REFER TO STRUCTURAL

S12 STEEL PLATE ON EXISTING MASONRY SHELF

\$13 CONCRETE FOOTING, REFER TO STRUCTURAL

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HOUSE CONSTRUCTED RUIN

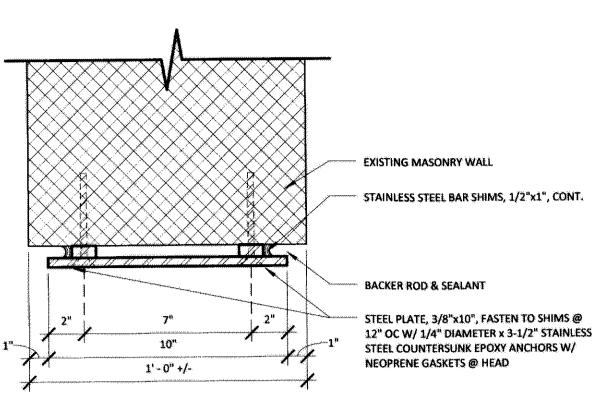
MERCER COUNTY MERCER COUNTY PARK

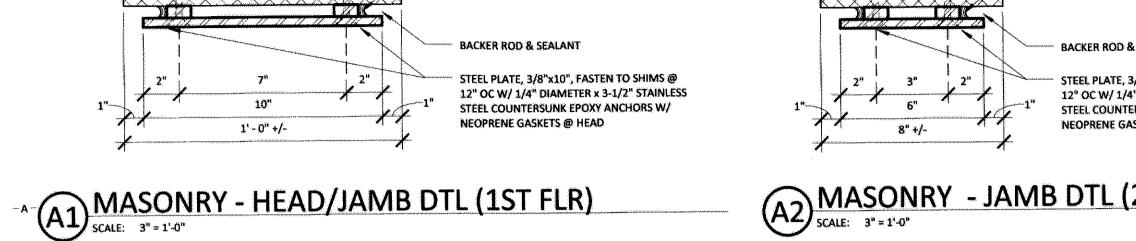
OCTOBER 1, 2017

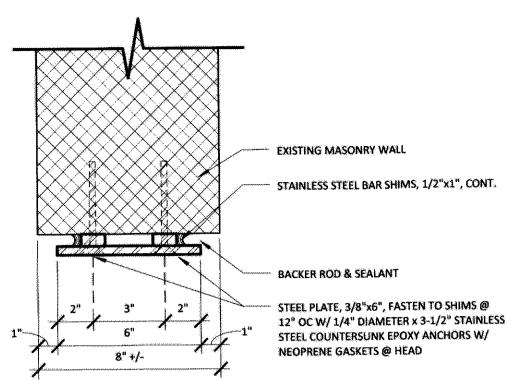
CONSTRUCTION DOCUMENTS

SECTIONS

A-3.0

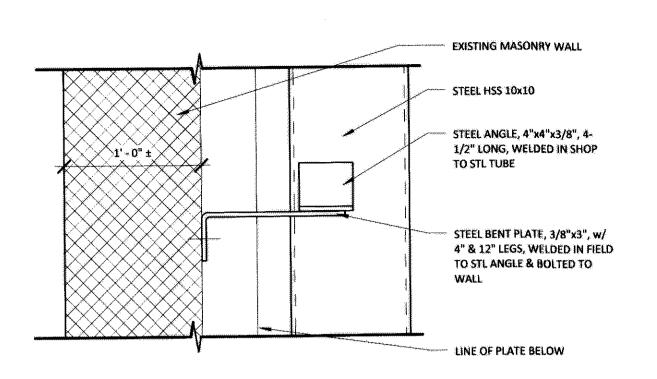






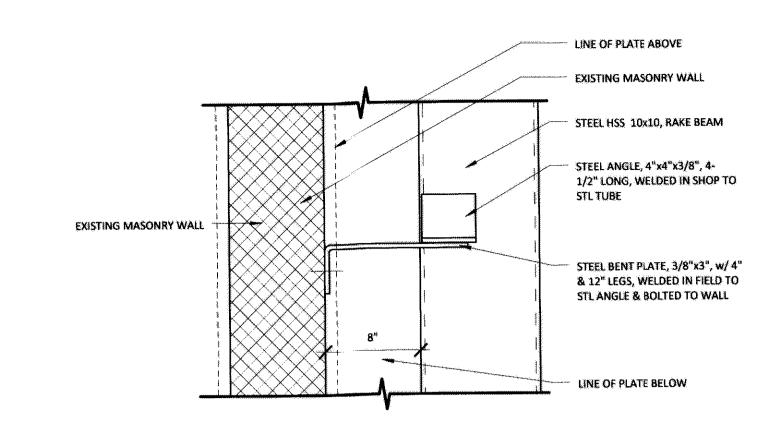
MASONRY - JAMB DTL (2ND FLR)

SCALE: 3" = 1'-0"

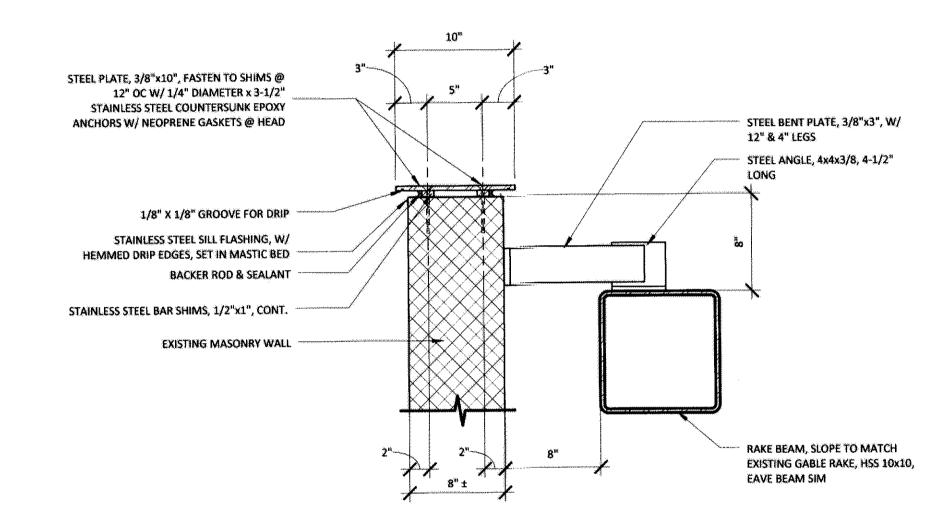


STEEL-MASONRY - PLAN DTL (2ND FLR)

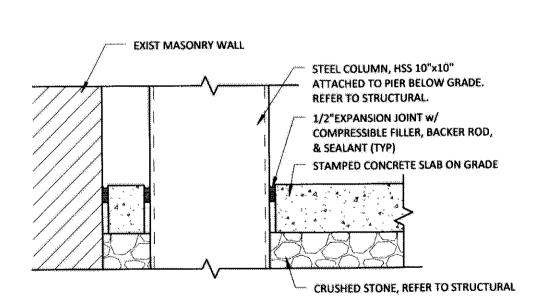
SCALE: 1 1/2" = 1'-0"





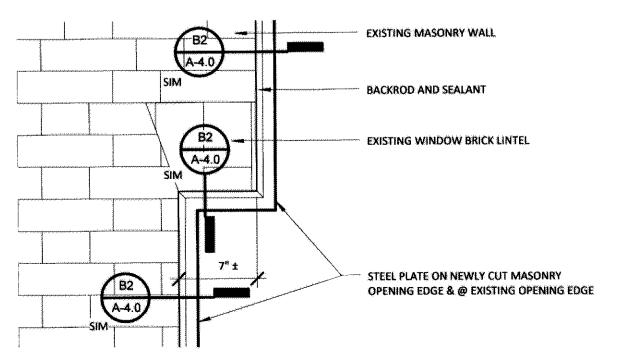


STEEL-MASONRY - SECTION DTL (TOP OF WALL)



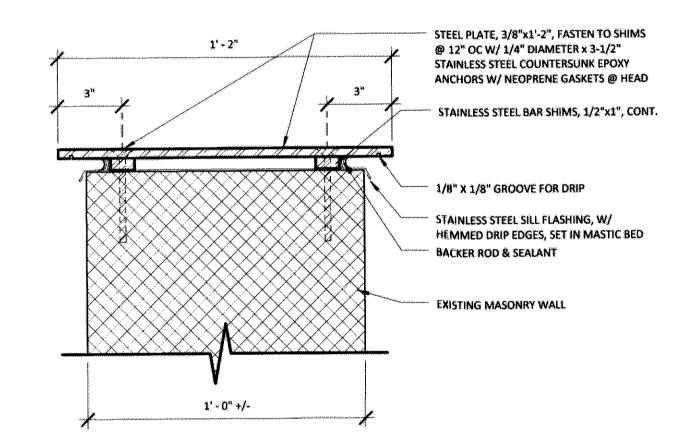
C5 CONCRETE-COLUMN - SECTION DTL (TYPICAL)

SCALE: 1 1/2" = 1'-0"



MASONRY CUT - ELEVATION DTL (NORTH WALL)

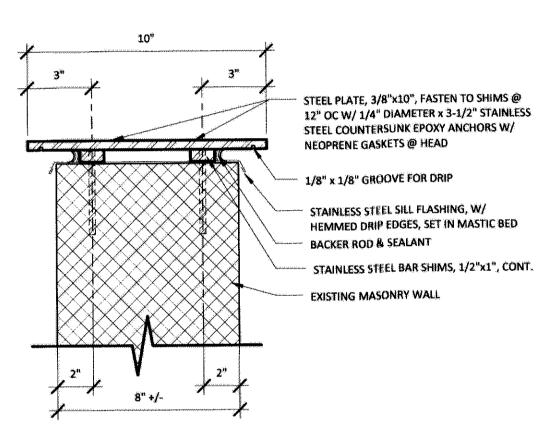
SCALE: 1 1/2" = 1'-0"



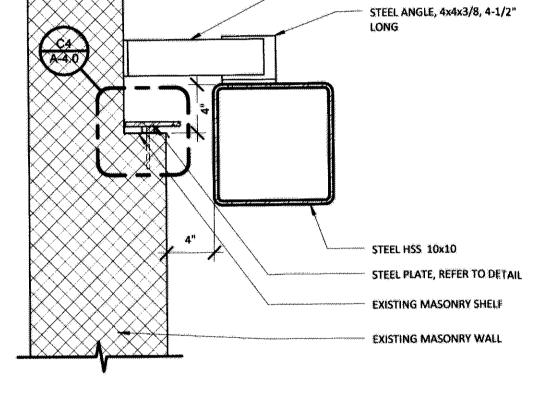


— B —

-C-



B2 MASONRY - SILL (2ND FLR)

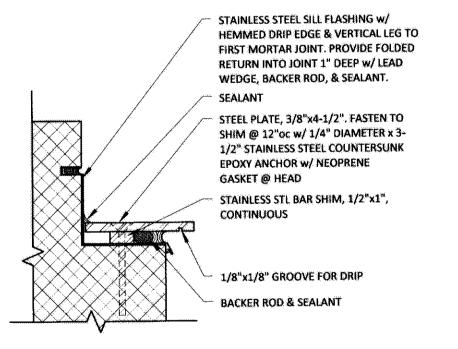


STEEL BENT PLATE, 3/8"x3", W/

12" & 4" LEGS

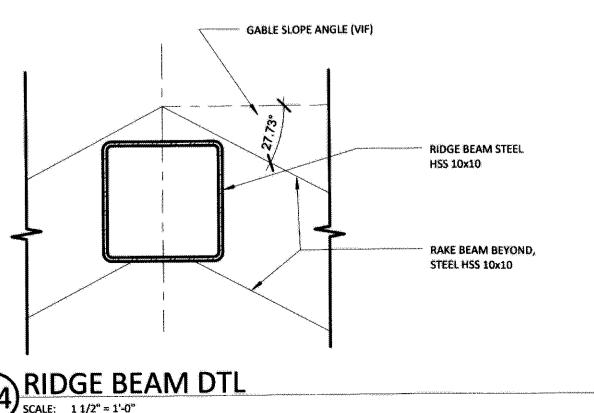
STEEL-MASONRY - SECTION DTL (2ND FLR)

SCALE: 11/2" = 1'-0"



STEEL-MASONRY - SECTION DTL (STL PLATE)

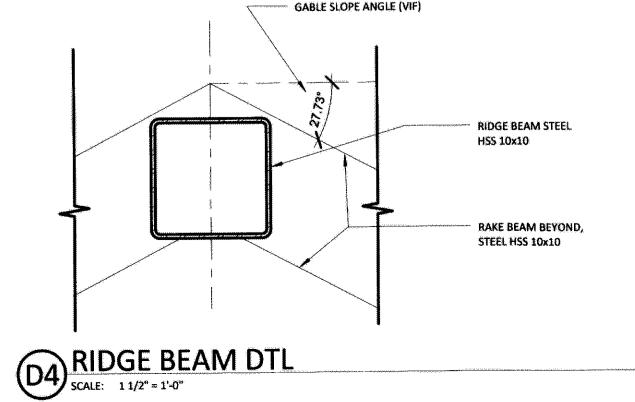
SCALE: 3"=1'-0"



**EXISTING MASONRY WALL** NON SHRINK GROUT FILL STEEL HSS TUBE 7" x 3" STAINLESS STEEL BAR SHIMS, 1/2"x1", CONT. BACKER ROD & SEALANT STEEL PLATE, 3/8"x6", FASTEN TO SHIMS @ 12" OC W/ 1/4" DIAMETER x 3-1/2" STAINLESS STEEL COUNTERSUNK EPOXY ANCHORS W/ NEOPRENE GASKETS @ HEAD

MASONRY - HEAD DTL (2ND FLR)

SCALE: 3" = 1'-0"



NON-SHRINK GROUT FILL STEEL HSS TUBE 10" x 6" STAINLESS STEEL BAR SHIMS, 1/2"x1", CONT. **BACKER ROD & SEALANT** STEEL PLATE, 3/8"x10", FASTEN TO SHIMS @ 12" OC W/ 1/4" DIAMETER x 3-1/2" STAINLESS STEEL COUNTERSUNK EPOXY 10° ANCHORS W/ NEOPRENE GASKETS @ HEAD 1" - 0" +/-

**EXISTING MASONRY WALL** 

MASONRY - HEAD DTL (1ST FLR)

SCALE: 3" = 1'-0"

Michael J. Mills FAIA NJC - 8207 Michael Schnoering AIA

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Project Name & Address **ROGERS** HOUSE CONSTRUCTED

RUIN

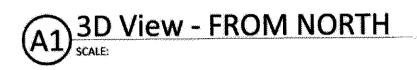
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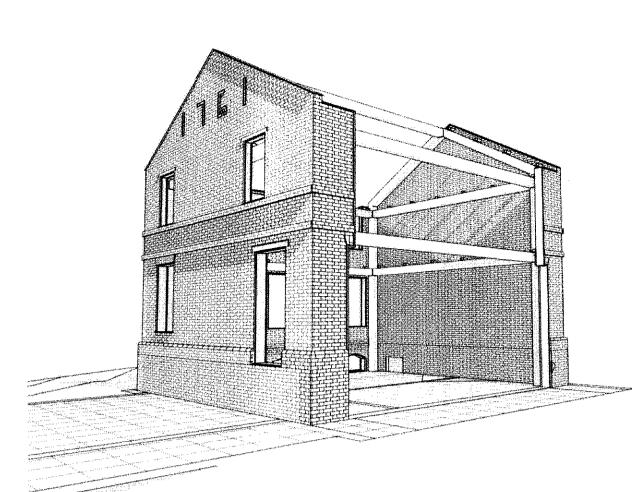
OCTOBER 1, 2017 CONSTRUCTION DOCUMENTS

Drawing Title DETAILS

A-4.0



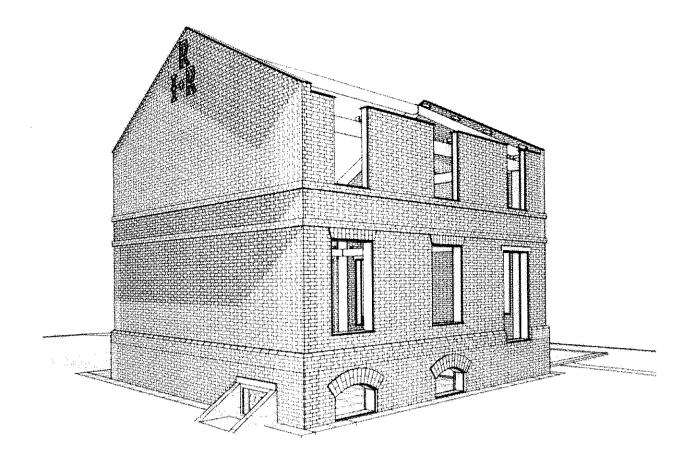
NORTH WALL DETAIL
SCALE:



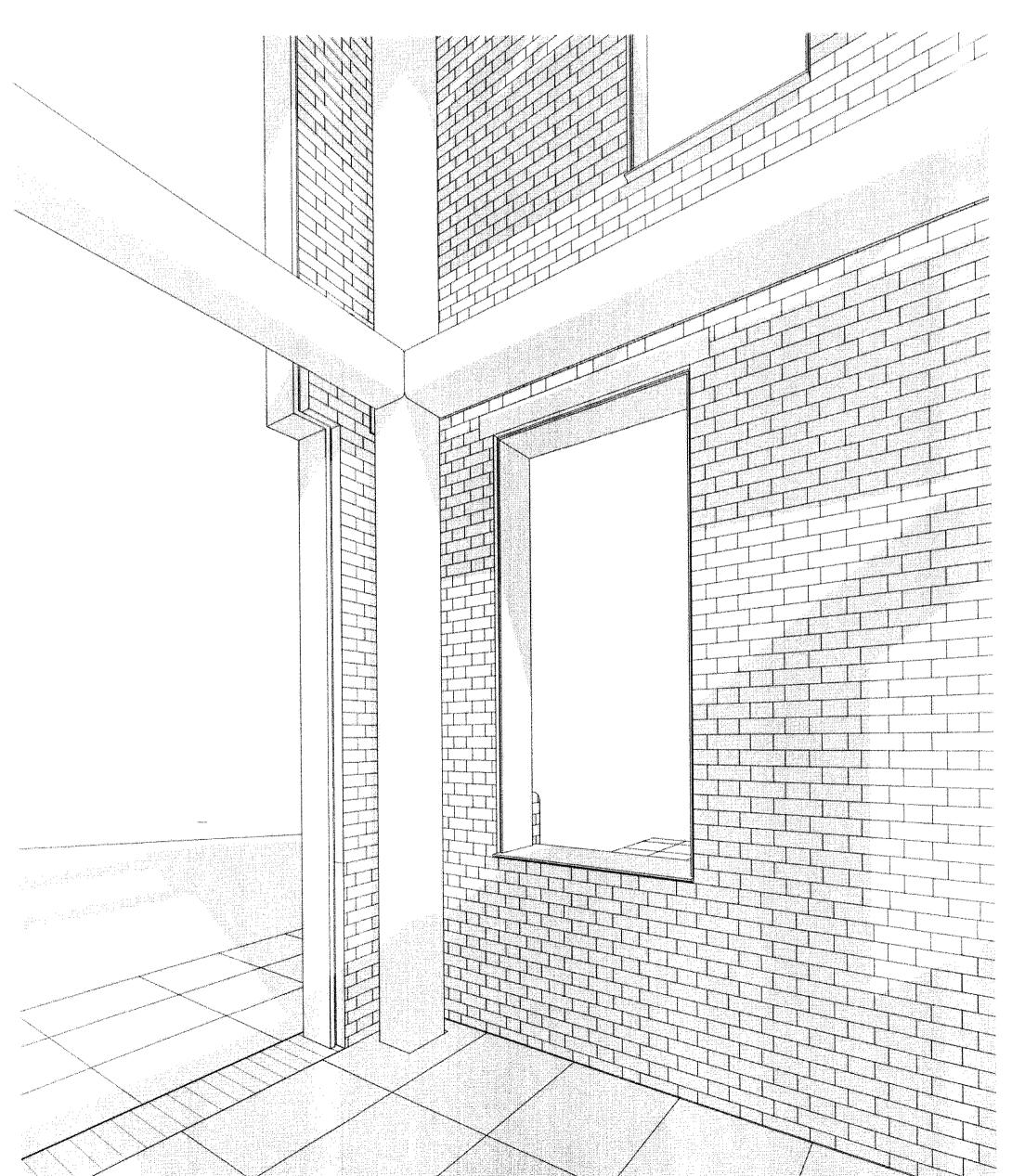
A2 3D View - FROM NORTH EAST

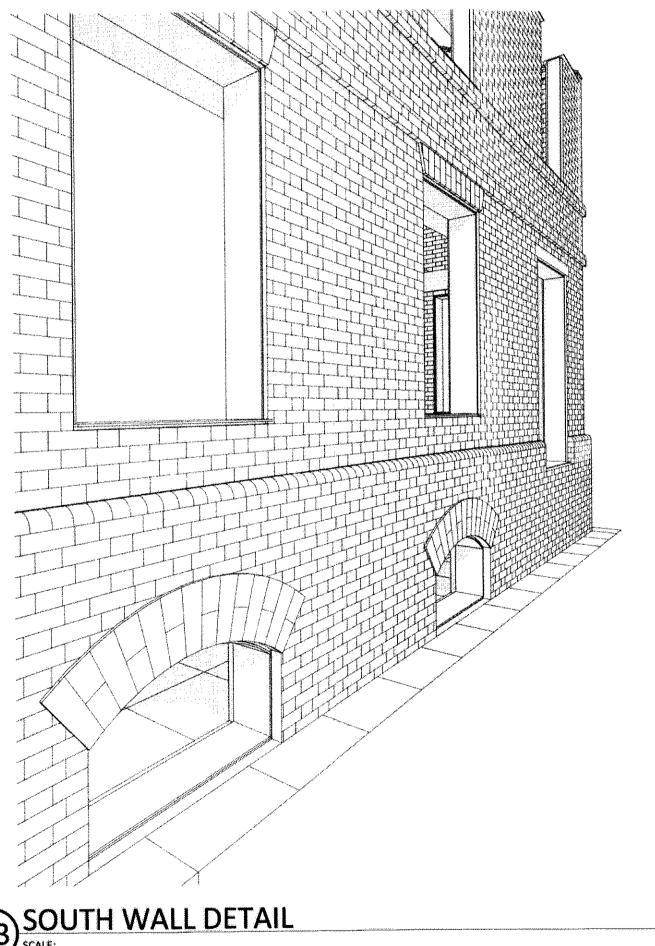


3D View - FROM SOUTH EAST

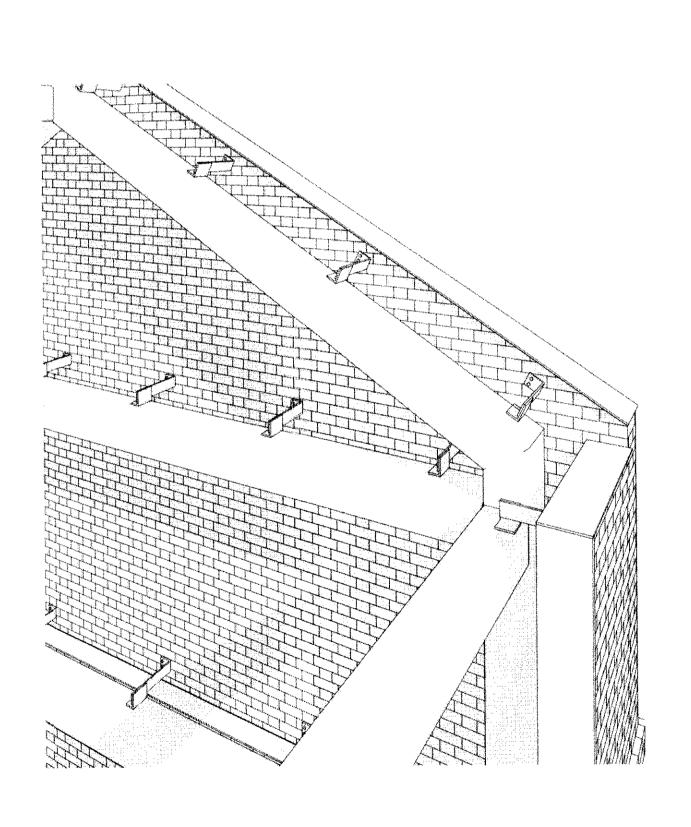


A5 3D View - FROM SOUTH WEST





C3 SOUTH WALL DETAIL
scale:



C5 NORTH WEST WALL DETAIL

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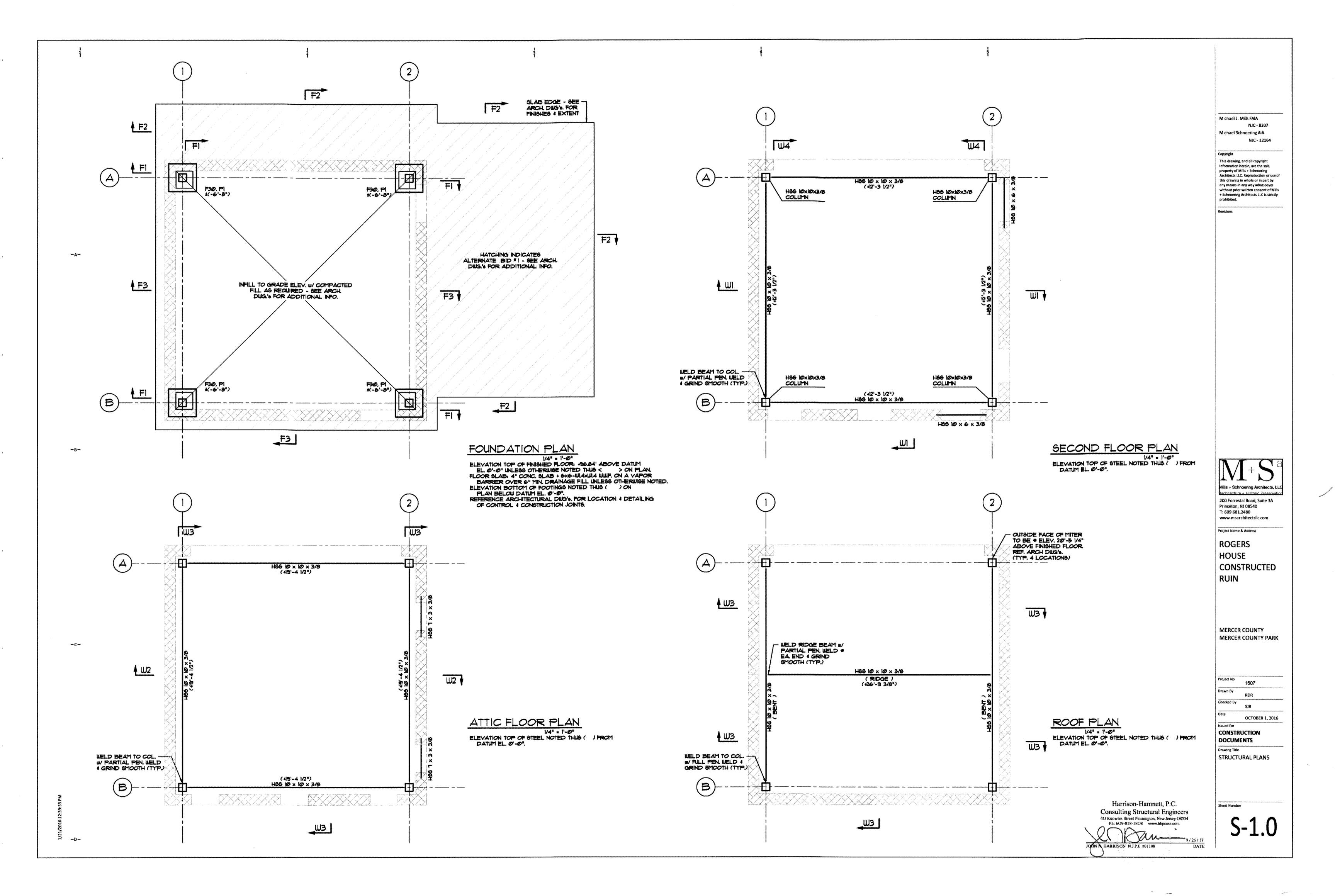
**ROGERS** HOUSE CONSTRUCTED RUIN

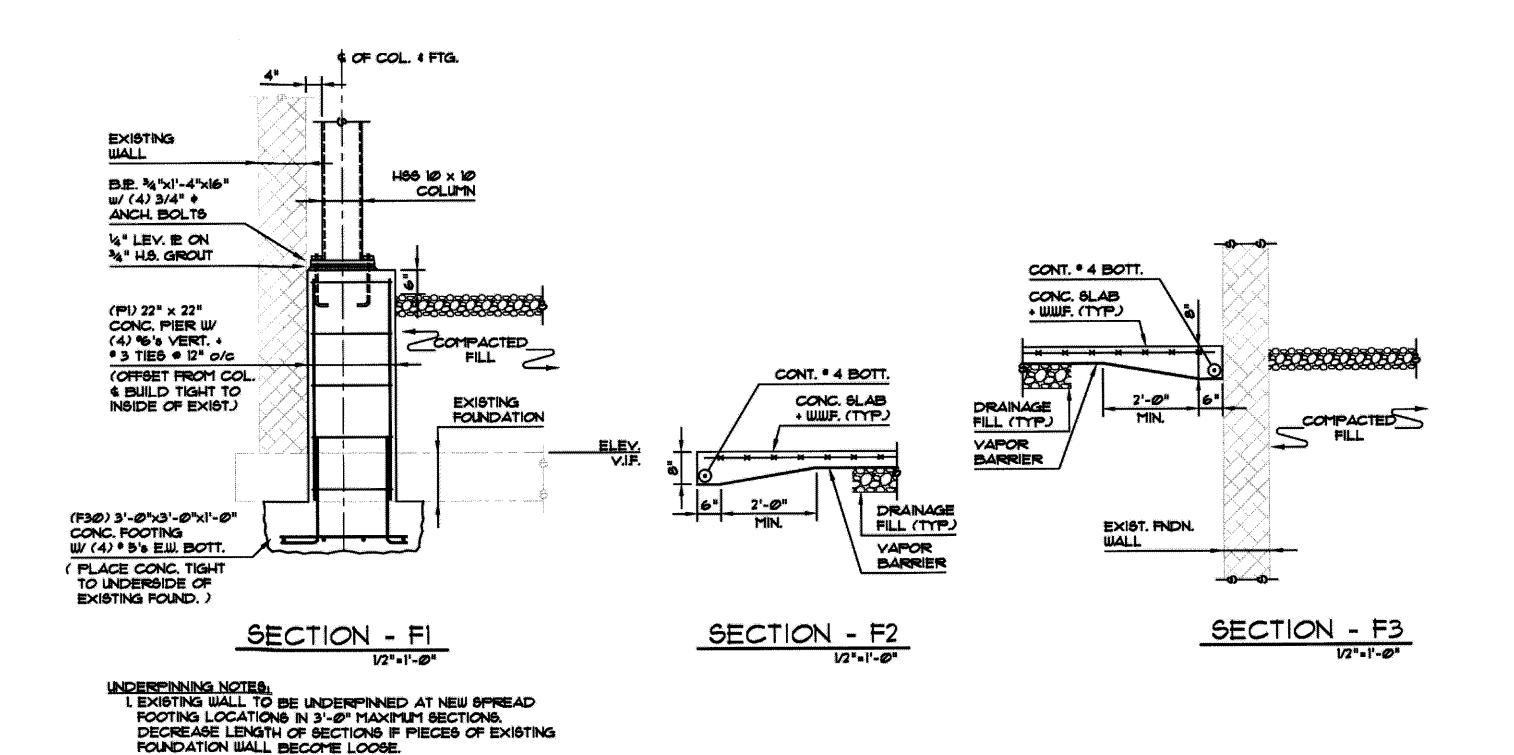
MERCER COUNTY MERCER COUNTY PARK

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Drawing Title
PERSPECTIVES

A-5.0

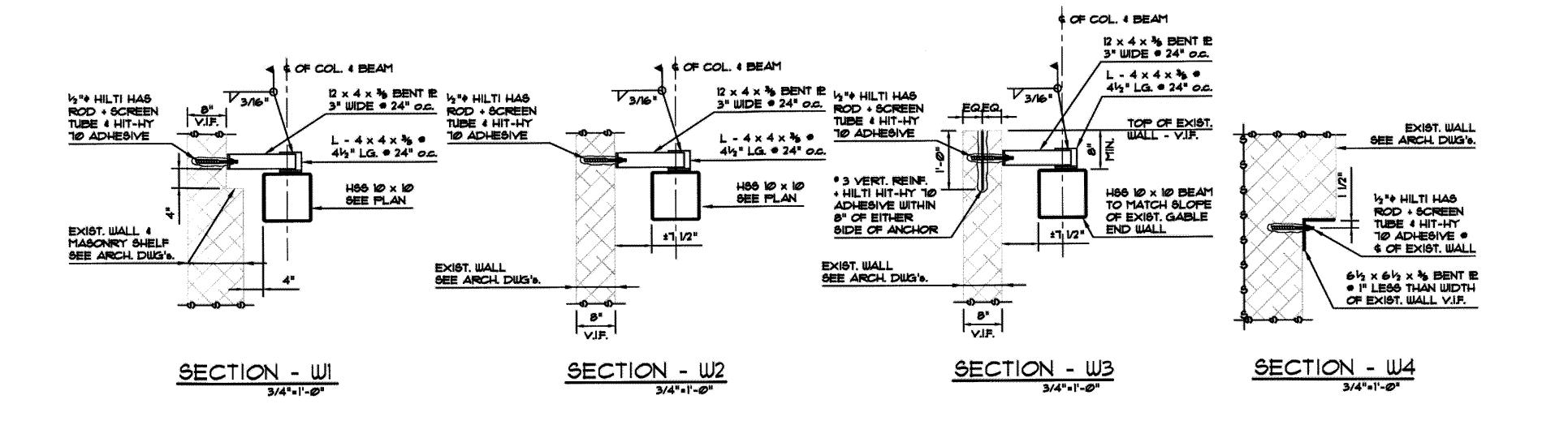


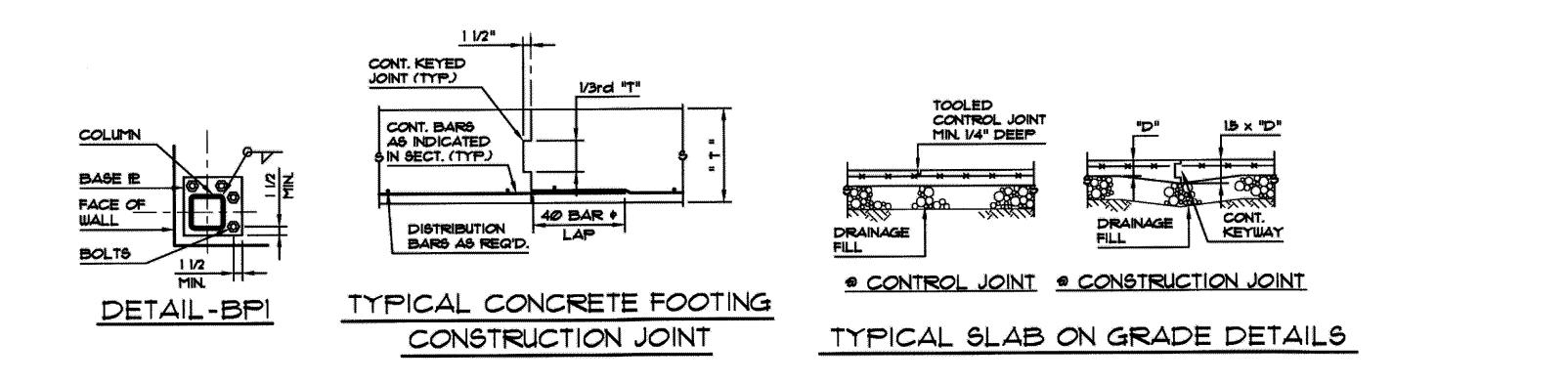


2. UNDERPIN WALLS IN ALTERNATING SEGUENCE.

SHORED DURING CONSTRUCTION.

3. EXISTING STRUCTURE AND SOIL EXCAVATION TO BE





#### GENERAL NOTES

#### FOUNDATION

All footings shall bear on soil having a minimum safe bearing capacity of 15 tone per square foot. Confirm in field prior to placing footings.

2. Elevations given correspond to the computed bottom of footings and are minimum depths which are not to be construed as limiting in any way the depth required to reach good bearing.

3. No footings shall be placed in water or on frozen ground.

4. No fill or backfill shall be placed over or against work at such time or in such a manner which would endanger the stability or otherwise damage 5. Fill and backfill material shall be free of deleterious organic matter.

6. Fill and backfill shall be clean bank run material conforming to the following graduation: 100% smaller than 4 inch sleves maximum 15% smaller than 7000 sleve, and approved as acceptable by a testing laboratory. 6. No fill or backfill shall be placed over or against work at such time or In such a manner which would endanger the stability or otherwise damage

8. All compacted fill to be at 85% minimum compaction.

#### CAST-IN-PLACE CONCRETE

1. All concrete work shall conform to the latest edition of the ACI Building

2. All concrete, except slabs on grade, shall attain 3000 PSI compressive strength at 28 days. All concrete for slabs on grade shall attain 3500 PSI compressive strength at 28 days.

#### REINFORCING

1. All reinforcing bar details shall conform to the latest ACI code and detailing manual.

2. All bars shall be ASTM A-615, Grade 60.

Welded wire fabric shall be ASTM A-185. 4. Clearance of main reinforcing from adjacent surfaces unless shown

otherwise shall be: A. Unformed surfaces in contact with ground or exposed to the weather:

B. Bottom surfaces of slabs on grade: 3"

Formed surfaces in contact with ground or exposed to weather: 5 bare or smaller: 1-1/2"

2. Bare larger than 5: 2"

D. Exterior wall surfaces: 2" E. In all cases not less than the clameter of the bar.

5. All reinforcement shall be inspected and approved by architect or his designate before concrete is poured.

6. Tolerances for placing reinforcing shall be: A tor- 1/4 inch for members with an effective depth of 24 inches or

B. +or- 1/2 inch for members with an effective depth of more than 24 T. Where continuous bare are ealled for, they shall be run continuously

around corners and lapped at necessary splices or hooked at discontinuous ends. Laps shall be 40 bar diameters. Bar laps may be offset to avoid control or construction joints.

### STRUCTURAL STEEL

1. All structural steel details shall be designed in accordance with the latest issue of the American institute of Steel Construction (AISC), "Specification for Structural Steel Buildings - Allowable Stress Design and Plastic Design".

2. Connections shall be designed to develop the full strength of the member over the required span, 1 1/2 times for composite members. 3. Provide double angle connections at all beam to wide flange columns and beam to beam connections whenever possible. The steel fabricator must notify the Structural Engineer if there are to be any changes. See Typical Tiru-Pi Detail for beam to tube column connections. 4. Field connections shall be made by high strength bolts 3/4" minimum in

diameter or welded as shown on drawings.

5. All pipe shapes shall be ASTM A53, Grade B, Fy = 35 KSI.

6. All tubes shapes shall be ASTM A500, Grade B, FY = 46 KSI. 7. All structural wide flange shapes to be ASTM A-992/A572, Grade 50. 8. All steel plates, angles, channels are to be ASTM A-36 unless indicated

## MISCELLANEOUS

Contractor shall verify all dimensions, sections and elevations on the

2. All walls shall be braced during construction until permanently restrained. 3. Reproductions of contract documents are not acceptable as shop drawings and will be rejected.

Michael J. Mills FAIA

Michael Schnoering AIA

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Project Name & Address

RUIN

**ROGERS** HOUSE **CONSTRUCTED** 

MERCER COUNTY MERCER COUNTY PARK

1507 RDR OCTOBER 1, 2016

**CONSTRUCTION** DOCUMENTS

**SECTIONS AND DETAILS** 

Harrison-Hamnett, P.C.

Consulting Structural Engineers 40 Knowles Street Pennington, New Jersey 08534

Ph: 609-818-1808 www.hhpccse.com

OHN N HARRISON NJ.P.E. #31198

S-2.0

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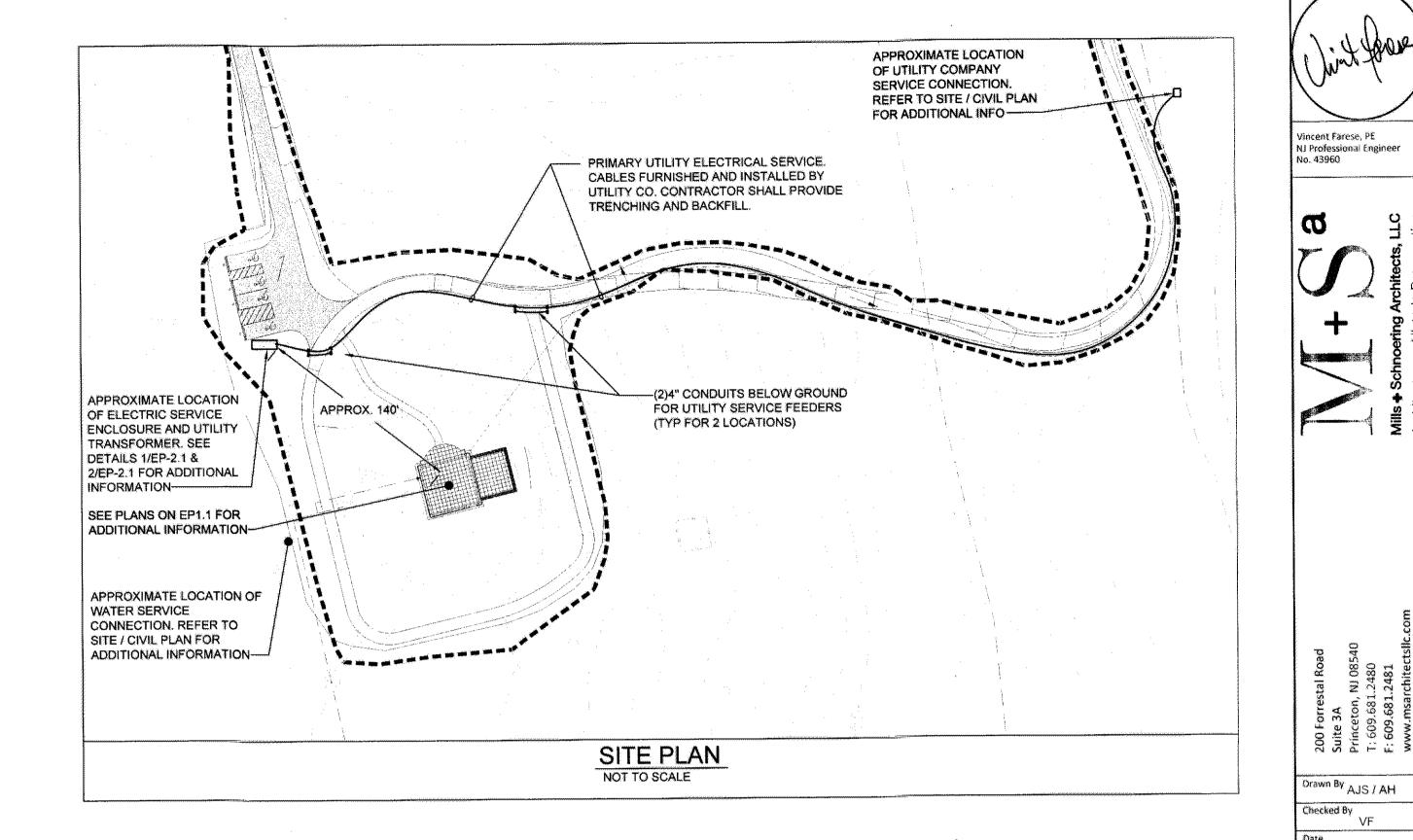
-B-

-c-

	PLUMBING SYMBOL LIST
	DRAINAGE PIPE
Ø	DIAMETER
	FLANGED UNION
o	PIPE-UP UNLESS OTHERWISE NOTED
G	PIPE DROP UNLESS OTHERWISE NOTED
LOW HIGH	DROP OR RISE
	BOTTOM CONNECTION
7	TOP CONNECTION
——————————————————————————————————————	VALVED CAPPED OUTLET
<b>—⋈</b> —	SHUT OFF VALVE
•	CONNECT TO EXISTING
	ABBREVIATIONS
DN	DOWN
DR	DRAIN
DWG	DRAWING
LF	LINEAR FEET
NTS	NOT TO SCALE
O/C	ON CENTER
PLBG	PLUMBING
SPEC	SPECIFICATIONS
STD	STANDARD
TYP	TYPICAL
٧	VENT
NOTE:	

	ELECTRICAL SYMBOL LIST
AG.	CONDUIT RUN CONCEALED: - TICK MARKS INDICATE NUMBER OF WIRES CONTAINED IN CONDUIT - TICK WITH 'G' INDICATES SEPARATE INSULATED GROUND WIRE (PROVIDE IN ALL CONDUITS WHETHER SHOWN OR NOT.)
LP-3A #1,3,5(R)	CIRCUIT HOMERUN TO PANELBOARD AND CIRCUITS INDICATED - ARROWS DENOTE NUMBER OF CIRCUITS (R) - DENOTES CIRCUIT VIA RELAY FOR CONTROL
o	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
□□   A   A   A	LIGHT FIXTURE AND OUTLET BOX  'A' DENOTES FIXTURE TYPE  '# DENOTES CIRCUIT 'a' DENOTES SWITCH CONTROL
	POWER/EQUIPMENT
	PANEL OR CABINET, TYPE AS NOTED
	PULL BOX
7	GROUNDING CONNECTION
<b>⊕</b> <sup>2</sup> <sub>GFI</sub>	DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W (GROUNDED), NEMA CONFIG. 5-20R: '2' - DENOTES CIRCUIT NUMBER 'GFI' - DENOTES GROUND FAULT INTERRUPTER
	ABBREVIATIONS
A G,GRD,GND GFI KVA	- AMPS - GROUND - GROUND FAULT INTERRUPTER - KILOVOLT - AMPS
KW MCB RLP-GM TYP	- KILOWATT - MAIN CIRCUIT BREAKER - DENOTES POWER PANEL DESIGNATION - TYPICAL - VOLTS

ALL ABBREVIATIONS NOT NECESSARILY SHOWN ON DRAWINGS.



## **GENERAL PLUMBING NOTES:**

- 1. THE CONTRACTOR SHALL NOT INTERRUPT ANY OF THE SERVICES OF THE EXISTING BUILDING OR SITE NOR INTERFERE WITH THE SERVICES IN ANY WAY WITHOUT THE EXPRESS PERMISSION IN WRITING BY THE OWNER, SUCH INTERRUPTIONS AND INTERFERENCES SHALL BE MADE AS BRIEF AS POSSIBLE.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING A FULL SET OF BID DOCUMENTS AND VISIT THE SITE TO MAKE HIMSELF AWARE OF THE TOTAL JOB BEFORE SUBMITTING HIS PRICE. FAILURE TO DO SO SHALL NOT HOLD THE OWNER RESPONSIBLE FOR ANY ADDITIONAL COST.

## GENERAL ELECTRICAL NOTES:

- CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING AND POWER AS REQUIRED TO ACCOMMODATE BOTH REMOVAL OF EXISTING AND INSTALLATION OF NEW WORK.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING A FULL SET OF BID DOCUMENTS AND VISIT THE SITE TO MAKE HIMSELF AWARE OF THE TOTAL JOB BEFORE SUBMITTING HIS PRICE. FAILURE TO DO SO SHALL NOT HOLD THE OWNER RESPONSIBLE FOR ANY ADDITIONAL COST.

EP. ELECT & PLUMBING DRAWINGS

EP-0.1 GENERAL NOTES & SYMBOL LIST

EP-0.2 ELECTRICAL SPECIFICATIONS

EP-0.3 PLUMBING SPECIFICATIONS

EP-1.1 FLOOR PLANS EP-2.1 DETAILS, SCHEDULES & RISER

CONSULTING ENGINEERS

- D-

- A -

- B -

- C -

RUIN

Date 10.01.2017

Revisions

Vincent Farese, PE

ROGERS

Project No

ELECT & PLUMBING: On the second secon & SYMBOL LISTS

File Name

### 1.01 CODES AND STANDARDS

- A) ALL WORK SHALL BE SYSTEMATICALLY, CAREFULLY AND NEATLY PERFORMED, TESTED AND SHALL CONFORM TO THE FOLLOWING:
- 1) THE NEW JERSEY UNIFORM CONSTRUCTION CODE.
- 2) THE 2015 INTERNATIONAL BUILDING CODE (INCLUDING SEISMIC REQUIREMENTS)
- 3) THE REQUIREMENTS OF UNDERWRITERS' LABORATORIES, INC. 4) THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
- 5) OCCUPATIONS SAFETY AND HEALTH ACT (OSHA) AND ALL AGENCIES HAVING JURISDICTION.
- 6) AMERICAN NATIONAL STANDARD INSTITUTE THE 2014 NATIONAL ELECTRICAL CODE.
- 8) COMPLY WITH APPLICABLE UTILITY COMPANY RULES
- REGULATIONS. 9) ILLUMINATING ENGINEERING SOCIETY.
- 10) CERTIFIED BALLAST MANUFACTURERS. 11) NATIONAL EQUIPMENT MANUFACTURER'S ASSOCIATION.
- B) SECURE ALL REQUIRED PERMITS AND INSPECTION CERTIFICATES AND TRANSMIT SAME TO THE OWNER AT THE COMPLETION OF THE WORK.

#### 1.02 WORK SCOPE

- THE SCOPE OF WORK CONSISTS OF:
- A) FURNISHING, INSTALLING AND CONNECTING NEW PANELBOARDS, POWER OUTLETS, LIGHT FIXTURES, SWITCHES, AND ASSOCIATED WIRING AND CONDUIT. B) NEW ELECTRICAL SERVICE TO BUILDING. COORDINATE ALL WORK WITH UTILITY COMPANY
- PRIOR TO INSTALLATION. C) OTHER WORK SHOWN ON DRAWINGS AND INDICATED IN SPECIFICATIONS.
- D) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS
- AND APPROVALS AND SHALL PAY ALL ASSOCIATED COSTS AND FEES.

#### 1.03 QUALITY ASSURANCE

- A) MATERIALS, EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE ADOPTED EDITION OF ALL APPLICABLE CODES THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION AND BUILDING MANAGEMENT. ALL UTILITY WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE BUILDING STANDARDS AND THE REQUIREMENTS OF THE LOCAL UTILITY COMPANY
- B) MATERIALS, EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE APPLICABLE REFERENCE STANDARDS PUBLISHED BY TH. UL, ANSI, IEEE AND NEMA.
- C) THE CONTRACTOR SHALL HAVE COMPLETED AT LEAST TWO PROJECTS OF SIZE AND COMPLEXITY SIMILAR TO THOSE REQUIRED UNDER THIS CONTRACT. ALL WORKMEN SHALL BE SKILLED IN THEIR RESPECTIVE TRADE.
- D) ALL WORK SHALL BE WARRANTED IN WRITING TO BE FREE FROM DEFECTS IN MATERIALS AND/OR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER. WARRANTY SHALL INCLUDE ALL COSTS OF PARTS, LABOR, TRAVEL AND LIVING EXPENSES REQUIRED TO REPAIR OR REPLACE DEFECTIVE ITEMS.

- A) SUBMIT THE FOLLOWING INFORMATION AS APPLICABLE AND AS REQUIRED FOR ALL WORK SPECIFIED UNDER THIS DIVISION:
  - MANUFACTURERS' PRODUCT DATA SHEETS AND SAMPLES WHERE REQUIRED.
  - 2. SHOP DRAWINGS INCLUDING DIMENSIONED EQUIPMENT LAYOUTS, POINT-TO-POINT WIRING DIAGRAMS AND SEQUENCES OF OPERATION.
  - 3. REPRODUCIBLE DRAWINGS, PDF, OR AUTOCAD FILES.
  - BOUND COPIES OF OPERATION AND MAINTENANCE MANUAL INCLUDING COPIES OF APPROVED SHOP DRAWINGS AND COMPLETE PARTS LIST WITH MANUFACTURERS NAME AND CATALOG NUMBERS.
  - CERTIFIED FACTORY AND FIELD TEST REPORTS.
- MANUFACTURERS' CERTIFICATIONS, WARRANTIES AND SPARE PARTS. ALL SUBMITTALS SHALL BE CLEARLY ANNOTATED TO DEMONSTRATE COMPLIANCE WITH CONTRACT REQUIREMENTS. REFER TO OTHER SECTIONS FOR ADDITIONAL SUBMITTAL REQUIREMENTS.
- SUBSTITUTIONS TO SPECIFIED ITEMS MUST COMPLY WITH ALL SPECIFICATION REQUIREMENTS AND WILL ONLY BE PERMITTED WHERE SUBMITTED AND APPROVED IN WRITING.

### 1.05 DELIVERY, STORAGE AND HANDLING

A) ALL EQUIPMENT SHALL BE DELIVERED IN MANUFACTURER'S ORIGINAL PROTECTIVE PACKAGING AND STORED IN A CLEAN, DRY PLACE PROTECTED FROM WEATHER, FUMES, WATER, DUST AND PHYSICAL DAMAGE. TOUCH UP DAMAGED FINISHES TO MATCH THE ORIGINAL FINISH.

## 1.06 BASIC MATERIAL AND METHODS

- A) COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES PRIOR TO INSTALLATION. ASSIST IN THE PREPARATION OF COORDINATION DRAWINGS AS REQUIRED BY THE GENERAL CONDITIONS.
- B) PROVIDE EXPANSION FITTINGS WHERE RACEWAYS CROSS BUILDING EXPANSION JOINTS.
- C) EQUIPMENT, DEVICES AND ENCLOSURES SHALL BE RATED NEMA 1 FOR INTERIOR LOCATIONS, NEMA 3R FOR DAMP LOCATIONS AND WET LOCATIONS.

### 1.07 AS-BUILT DRAWINGS

THE CONTRACTOR SHALL AT THE COMPLETION OF THE PROJECT AND PRIOR TO REQUESTING FINAL PAYMENT, SUBMIT WASH-OFF MYLAR AS-BUILT DRAWINGS OF THE ACTUAL INSTALLATION OF THE ELECTRICAL WORK. THE CONTRACTOR MAY, AT HIS OWN EXPENSE, OBTAIN MYLAR COPIES OF THE CONTRACT DOCUMENTS FOR PREPARATION OF AS-BUILT DRAWINGS.

### 1.08 INSPECTION

- A) ALL STAGES OF THE INSTALLATION WILL BE INSPECTED BY THE OWNER AND/OR OWNERS REPRESENTATIVE FOR COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS. ANY PORTION OF THE CONSTRUCTION NOT MEETING THOSE REQUIREMENTS TO THE SATISFACTION OF THE ENGINEER SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- PROVIDE PROPER EQUIPMENT AND REASONABLE ASSISTANCE AS THE OWNER AND/OR OWNERS REPRESENTATIVE MAY REQUIRE TO FACILITATE ACCESS AND INSPECTION AT THE CONSTRUCTION SITE.

#### PART 2- PRODUCTS

#### 2.01 RACEWAYS

- A) RIGID GALVANIZED STEEL (RGS) CONDUIT SHALL CONFORM TO UL 6. FITTINGS SHALL BE THREADED.
- B) ALL CUTTING AND PATCHING REQUIRED FOR EQUIPMENT INCLUDED IN THESE SPECIFICATIONS SHALL BE DONE BY THIS CONTRACTOR.
- C) THIS CONTRACTOR SHALL NOT DO ANY CUTTING THAT MAY IMPAIR THE STRENGTH OF BUILDING CONSTRUCTION. NO HOLES ARE TO BE DRILLED INTO ANY STRUCTURAL MEMBERS, CLAMPS OR OTHER APPROVED HOLDING DEVICES ARE TO BE USED.
- D) ALL CUTTING OF EXISTING FLOORS, CEILINGS AND WALLS SHALL BE PREFORMED IN A MANNER SO AS TO MINIMIZE DAMAGE TO ADJACENT MATERIALS, PATCHING OF ALL SURFACES SHALL BE PREFORMED IN A MANNER APPROVED BY THE ARCHITECT TO INSURE COMPLETE MATCHING WITH ADJACENT FINISHES AFTER FINAL TREATMENT OF
- E) MINIMUM RACEWAY SIZE SHALL BE 1". RACEWAYS SHALL BE RUN PARALLEL TO BUILDING STRUCTURAL LINES. RACEWAYS SHALL NOT BE RUN HORIZONTALLY BELOW 8-0" AFF IN PARTITIONS. ALL EMPTY RACEWAYS SHALL BE FURNISHED WITH A 200LB TEST NYLON

#### F) CONDUIT UTILIZATION SHALL BE AS FOLLOWS:

- 1. RIGID GALVANIZED STEEL (RGS) ALL EXPOSED LOCATIONS. PROVIDE BITUMASTIC COATING WHERE ENCASED IN CONCRETE OR IN DIRECT CONTACT WITH EARTH.
- 2. LIQUID TIGHT FLEXIBLE CONDUIT FINAL CONNECTIONS TO LIGHT FIXTURES AND
- 3. RIGID NONMETALLIC CONDUIT, PVC SCHEDULE 40 UNDERGROUND INSTALLATIONS WITH RGS ELBOWS AND STUB-UPS.

- A) OUTLET, PULL AND JUNCTION BOXES SHALL BE FABRICATED FROM STEEL AND CONFORM TO UL 50, UL514 AND NEMA OS1, BOXES FOR EXTERIOR LOCATIONS AND/OR WHERE DENOTED "WP" SHALL BE CAST STEEL WITH GASKETED COVERS.
- B) BOXES SHALL CONTAIN SUITABLE KNOCKOUTS. BARRIERS SHALL BE FURNISHED AS REQUIRED BY CODE.
- C) BOXES SHALL BE SIZED AS REQUIRED BY CODE FOR NUMBER AND GAUGE OF LOCATIONS AND/OR DENOTED "WP" SHALL BE CAST IRON WITH GASKETED COVERS. CONDUCTORS THEREIN, EXCEPT WHERE NOTED TO BE LARGER, THE MINIMUM BOX SIZE SHALL BE 4" SQUARE BY 1-1/2" DEEP. COVERS GREATER THAN 50 LBS. SHALL BE DIVIDED INTO MULTIPLE SECTIONS.

#### 2.03 WIRES, CABLES, SPLICES AND TERMINATIONS

- A) POWER AND CONTROL WIRING SHALL BE COPPER, MINIMUM 98% CONDUCTIVITY, WITH TYPE THHN/THWN INSULATION RATED 600 VOLTS. MINIMUM WIRE SIZE SHALL BE #12 AWG. CONDUCTORS SHALL BE SOLID FOR WIRE SIZED #10 AWG AND SMALLER AND STRANDED FOR WIRE SIZES #8 AWG AND LARGER.
- B) CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS:

240/120V	<u>PHASE</u>
BLACK	Α
RED	B
WHITE	NEUTRAL
GREEN	GROUND
GREEN W/T TRACER	ISOLATED GROUND
WHITE WIT TRACER	NEUTRAL FOR GFI CIRCUIT

- C) CONDUCTOR SIZES SHALL BE INCREASED WHERE REQUIRED BY CODE AND/OR THE ENGINEER TO COMPENSATE FOR VOLTAGE DROP AND HIGH AMBIENT TEMPERATURE
- D) SPLICES FOR WIRE SIZES #10 AWG AND SMALLER SHALL BE MADE WITH SPRING CONNECTORS AND TAPE. SPLICES FOR WIRE SIZES #8 AWG AND LARGER SHALL BE HYDRAULIC COMPRESSION TYPE WITH PRE-MOLDED COVER AND TAPE.

### 2.04 WIRING DEVICES

- A) WIRING DEVICES SHALL BE DECORA STYLE WITH NEMA CONFIGURATIONS AS INDICATED ON THE DRAWINGS, COLOR OF DEVICES SHALL BE AS SELECTED BY THE ARCHITECT. WIRING DEVICES SHALL BE MANUFACTURED BY ARROW-HART, HUBBELL, LEVITON, PASS & SEYMOUR OR APPROVED EQUAL.
- B) FACE PLATES SHALL BE FURNISHED FOR ALL OUTLETS. DEVICES MOUNTED ADJACENT TO EACH OTHER SHALL BE FURNISHED WITH A COMMON FACE PLATE AND BE GANGED IN ONE

### 2.05 HANGERS AND SUPPORTS

- A) THREADED RODS SHALL BE FULLY GALVANIZED, MINIMUM 3/8" DIAMETER. MODULAR CHANNEL SUPPORTS SHALL BE GALVANIZED STEEL. SUPPORT CLIPS AND FASTENERS SHALL BE LISTED AND APPROVED FOR THE APPLICATION. STRAPS AND CLAMPS SHALL BE MALLEABLE IRON.
- B) SUPPORTS SHALL BE SIZED TO ACCOMMODATE THE LOAD REQUIRED. ALL WORK SHALL BE SUPPORTED INDEPENDENTLY OF THE WORK OF OTHER TRADES INCLUDING CEILING SYSTEM SUPPORTS.
- C) PANELS AND EQUIPMENT LOCATED ON OTHER THAN MASONRY WALLS SHALL BE MOUNTED WITH MODULAR CHANNEL SUPPORTS SECURED TO THE BUILDING STRUCTURE.
- D) APPROVED SEISMIC RESTRAINTS RATED TO RESIST 1/2G OF FORCE SHALL BE FURNISHED FOR ALL ELECTRICAL WORK WHERE REQUIRED BY LOCAL BUILDING CODES AND THE **AUTHORITIES HAVING JURISDICTION.**

### 2.06 PANELBOARDS

- A) PANELBOARDS SHALL BE 120/240V, 1 PHASE, 3 WIRE CONFIGURATION WITH COPPER BUS BARS OF RATINGS INDICATED ON CONTRACT DRAWINGS, FULL NEUTRAL BUS BARS AND SEPARATE GROUND BUS. CABLE LUGS SHALL BE MECHANICAL TYPE. FEED-THROUGH LUGS AND CABLE CONNECTIONS SHALL BE PROVIDED FOR MULTIPLE SECTION PANELS.
- B) PANEL BUS BARS SHALL BE PROPORTIONED FOR A CURRENT DENSITY OF 1000 AMPERES PER SQUARE INCH OF CROSS SECTIONAL AREA.
- C) PANELBOARD ENCLOSURES SHALL BE GALVANIZED CODE GAUGE STEEL. TRIMS SHALL BE SURFACE TYPE IN UNFINISHED SPACES AND FLUSH TYPE IN FINISHED SPACES, WITH DOOR-IN-DOOR CONSTRUCTION AND ANSI 61 GRAY ENAMEL FINISH, DOORS SHALL BE LOCKABLE AND ALL LOCKS SHALL BE KEYED ALIKE. FURNISH ONE KEY FOR EACH PANEL FURNISH TYPEWRITTEN DIRECTORIES MOUNTED BEHIND FRAME INSIDE DOOR UNDER A PLASTIC WINDOW. ENGRAVED NAMEPLATES SHALL BE FURNISHED FOR EACH
- D) PANEL ENCLOSURES SHALL BE OF SUFFICIENT SIZE TO ALLOW A GUTTER AT LEAST 5-3/4" IN WIDTH ENTIRELY SURROUNDING EACH SECTION OF BOARD. INCREASE SIZE TO ACCOMMODATE FEEDER SIZE.
- E) CIRCUIT BREAKERS SHALL BE MOLDED CASE, BOLTED-IN-PLACE WITH THERMAL-MAGNETIC TRIP ELEMENT, MINIMUM INTERRUPTING RATINGS SHALL AS SHOWN ON DRAWINGS. CIRCUIT BREAKERS FOR UNSWITCHED LIGHTING CIRCUITS SHALL BE RATED FOR SWITCHING DUTY. MAIN CIRCUIT BREAKERS SHALL BE MOUNTED SEPARATELY FROM BRANCH BREAKERS AT TOP OR BOTTOM.
- F) PANELBOARDS SHALL BE MOUNTED ON MODULAR CHANNEL SUPPORTS SECURED TO THE BUILDING STRUCTURE OR MAY BE DIRECTLY SUPPORTED FROM MASONRY WALLS. COORDINATE THE DIRECTION OF FEEDER ENTRIES TO PANELBOARDS WITH FIELD
- G) ALL PANELBOARDS SHALL BE PHASE BALANCED TO WITHIN ±10% OF THE AVERAGE AMPS PER PHASE UPON COMPLETION OF WORK.
- H) ENCLOSURES FOR TERMINAL CABINETS SHALL BE THE SAME AS SPECIFIED FOR PANELBOARD ENCLOSURES.
- I) PANELS SHALL BE AS MANUFACTURED BY SIEMENS, GE, SQUARE D OR C-H.

#### 2.07 LIGHTING FIXTURES AND EQUIPMENT

- A) LIGHTING FIXTURES SHALL BE SPECIFICATION GRADE AND FURNISHED COMPLETE WITH ALL REQUIRED MOUNTING HARDWARE. FIXTURES SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE ESTABLISH THE PERFORMANCE REQUIREMENTS. SUBSTITUTIONS MUST MEET OR EXCEED THE PERFORMANCE OF THE SPECIFIED FIXTURE.
- B) SUBMIT SCALED LAYOUT DRAWINGS FOR CONTINUOUS FIXTURES. SUBMIT SAMPLES WHEN REQUIRED BY THE LIGHTING FIXTURE SCHEDULE OR WHEN REQUESTED FOR SUBSTITUTIONS.
- C) FIXTURE LENSES AND LOUVERS SHALL BE PROTECTED FROM DUST AND DIRT DURING CONSTRUCTION AND SHALL BE CLEANED PRIOR TO PROJECT COMPLETION, REFLECTORS SHALL BE ADJUSTED AS REQUIRED.

A) PROVIDE INSERTS, EXPANSION SHIELD LUGS, ANCHORS, BOLTS WITH NUTS AND WASHERS, SHIMS OR ANY OTHER TYPE OF FASTENING DEVICES REQUIRED TO FASTEN PANELS OR OTHER EQUIPMENT TO FLOORS, WALLS OR CEILINGS. UNLESS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE CONTRACT DRAWINGS, ALL FASTENERS SHALL BE HOT-DIPPED GALVANIZED, OF SIZES AND TYPES RECOMMENDED BY THE EQUIPMENT MANUFACTURER AND AS APPROVED BY THE ENGINEER.

## PART 3 - EXECUTION

### 3.01 CUTTING AND PATCHING

- A) ALL CUTTING AND PATCHING REQUIRED FOR EQUIPMENT INCLUDED IN THESE SPECIFICATIONS SHALL BE DONE BY THIS CONTRACTOR.
- THIS CONTRACTOR SHALL NOT DO ANY CUTTING THAT MAY IMPAIR THE STRENGTH OF BUILDING CONSTRUCTION, NO HOLES ARE TO BE DRILLED INTO ANY STRUCTURAL MEMBERS, CLAMPS OR OTHER APPROVED HOLDING DEVICES ARE TO BE USED.
- C) ALL CUTTING OF EXISTING FLOORS, CEILINGS AND WALLS SHALL BE PERFORMED IN A MANNER SO AS TO MINIMIZE DAMAGE TO ADJACENT MATERIALS. PATCHING OF ALL SURFACES SHALL BE PERFORMED IN A MANNER APPROVED BY THE ARCHITECT TO INSURE COMPLETE MATCHING WITH ADJACENT FINISHES AFTER FINAL TREATMENT OF SURFACES.

### 3.02 GROUNDING

A) THE DISTRIBUTION SYSTEM SHALL BE COMPLETELY AND PROPERLY GROUNDED USING APPROVED FITTINGS. ALL CONDUCTING WIRE ENCLOSURES SHALL BE SECURELY BONDED TOGETHER SO THAT EVERY CONDUCTING COMPONENT IS PROVIDED WITH A LOW RESISTANCE PATH TO GROUND. SEPARATE INSULATED GROUND CONDUCTORS SHALL BE RUN WITH ALL FEEDERS. RECEPTACLE BRANCH CIRCUITS AND CIRCUITS FEEDING LIGHTING FIXTURES AND EQUIPMENT.

## 3.03 IDENTIFICATION OF WORK

- A) ALL PANELBOARDS, EQUIPMENT AND CABINETS SPECIFIED HEREIN SHALL BE CLEARLY IDENTIFIED WITH THE EQUIPMENT DESIGNATION, VOLTAGE AND AMPERE RATING, FUSE RATING, EQUIPMENT SERVED AND ORIGIN OF THE INCOMING FEED, IDENTIFICATION SHALL BE BY WHITE ON BLACK PLASTIC NAMEPLATE WITH 1/2" MINIMUM LETTERING ATTACHED BY SCREWS.
- B) JUNCTION BOXES AND CONTROL PANELS SHALL BE IDENTIFIED WITH PANEL AND CIRCUIT NUMBERS OR SYSTEM NAME. FACE PLATES OF SWITCHES FOR EQUIPMENT SHALL BE IDENTIFIED WITH THE NAME OF THE DEVICE CONTROLLED. IDENTIFICATION SHALL BE BY INDELIBLE MARKER IN CONCEALED LOCATIONS AND ADHESIVE LABELS IN EXPOSED LOCATIONS.
- C) EMPTY CONDUITS SHALL BE IDENTIFIED WITH TAGS AT BOTH ENDS INDICATING THE LOCATION OF TERMINATION AT THE OPPOSITE END.

#### 3.04 TEMPORARY LIGHT AND POWER

A) PROVIDE TEMPORARY LIGHT AND POWER SYSTEM (AS PART OF CONTRACT) ADEQUATE FOR THE REQUIREMENTS OF ALL TRADES DURING CONSTRUCTION. TEMPORARY SYSTEM SHALL BE DISCONNECTED AND REMOVED WHEN PERMANENT SERVICE IS IN OPERATION.

THE CONTRACTOR SHALL GIVE WRITTEN NOTICE THAT THE FOLLOWING ITEMS HAVE BEEN

- COMPLETED: REQUIRED AGENCY APPROVALS.
  - 2. DEMONSTRATIONS AND STATE OF NEW JERSEY INSTRUCTION.
  - 3. RESOLUTION OF OUTSTANDING SUBMITTALS AND PUNCH LIST ITEMS. AS-BUILT DRAWINGS.
- TURNOVER OF SPARE LAMPS, KEYS, AND ANY REQUIRED SPARE PARTS OR TOOLS.
- 6. SYSTEM STARTUP, TESTING AND ADJUSTMENT. 7. MANUFACTURER'S CERTIFICATIONS, WARRANTIES AND O & M MANUALS.

### AFTER COMPLETION OF THE ENTIRE ELECTRICAL INSTALLATION:

- 1. THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, SHALL CLEAN ALL SWITCHES, CABINETS, DEVICE PLATES, FIXTURES AND OTHER ITEMS FURNISHED UNDER THIS CONTRACT AND SHALL ENSURE THAT ALL PANELBOARD DIRECTORIES ARE IN PLACE AND COMPLETED OR REVISED AS REQUIRED BY THE WORK, AND THAT ALL IDENTIFICATION AND MARKING OF EQUIPMENT, CABLES, ALL JUNCTION BOXES AND OTHER ITEMS IS COMPLETED.
- 2. THE CONTRACTOR SHALL REPAIR OR REPLACE, AS DIRECTED BY THE ENGINEER, ANY ITEM DAMAGED DUE TO INSTALLATION OR RELOCATION OF EQUIPMENT OR DEVICES, AT NO ADDITIONAL COST TO THE STATE OF NEW JERSEY

#### 3.06 STARTUP, TESTING AND ADJUSTMENT

- A) PROVIDE THE SERVICES OF MANUFACTURERS' FACTORY TRAINED TECHNICIANS FOR SYSTEM STARTUP, TESTING AND ADJUSTMENT.
- B) THE FOLLOWING TESTS AND ADJUSTMENTS SHALL BE PERFORMED ON EQUIPMENT FURNISHED BY THIS CONTRACTOR AND OTHERS: 1. WIRING SYSTEMS - CONTINUITY, PHASE ROTATION, PHASE BALANCING AND
  - INSULATION RESISTANCE (MEGGER) GROUNDING SYSTEM - CONTINUITY AND RESISTANCE TO GROUND
  - 3. BUS CONNECTIONS THERMOGRAPHIC SCANNING
- C) PROVIDE 48 HOURS ADVANCE NOTICE OF ALL TESTS. SUBMIT COMPLETE WRITTEN TEST PROCEDURES AND TEST REPORTS.

CONSULTING ENGINEERS

ncent Farese, PE V) Professional Engineer No. 43960

Checked By VF

10.01.2017

(7)

1220 Drawing Title **ELECT & PLUMBING:** ELECTRICAL

SPECIFICATION

ile Name 8631EP02

PRINCETON, NJ 08540 TEL. (609) 716-6160 FAX (609) 716-6162

- C -

#### 1. CODES AND STANDARDS

- ALL WORK SHALL BE SYSTEMATICALLY, CAREFULLY AND NEATLY PERFORMED, TESTED AND SHALL CONFORM TO THE FOLLOWING:
- 1) THE NEW JERSEY UNIFORM CONSTRUCTION CODE.
- 2) THE 2015 INTERNATIONAL BUILDING CODE (INCLUDING SEISMIC REQUIREMENTS).
- 3) THE REQUIREMENTS OF UNDERWRITERS' LABORATORIES, INC.
- 4) THE 2015 NATIONAL STANDARD PLUMBING CODE.
- 5) OCCUPATIONS SAFETY AND HEALTH ACT (OSHA) 6) COMPLY WITH APPLICABLE UTILITY COMPANY RULES AND REGULATIONS AND ALL AGENCIES HAVING JURISDICTION.
- SECURE ALL REQUIRED PERMITS AND INSPECTION CERTIFICATES. AND TRANSMIT SAME TO THE OWNER AT THE COMPLETION OF THE WORK.

#### 2. WORK SCOPE

- A -

- A. PLUMBING SYSTEM ALTERATIONS REQUIRED TO FOR THE AREA OF WORK AND TIE THEM INTO THE NEW POST HYDRANT, COORDINATION WITH THE SITE / CIVIL DRAWINGS ARE REQUIRED. COORDINATION WITH THE LOCAL WATER COMPANY FOR EXACT INSTALLATION REQUIREMENTS. ALL REQUIRED LABOR, MATERIALS AND CONTRACTOR'S SERVICES NECESSARY FOR COMPLETE SAFE INSTALLATION OF PLUMBING WORK IN FULL CONFORMITY WITH REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION: ALL AS INDICATED ON DRAWINGS AND/OR HEREIN SPECIFIED, INCLUDING THE FOLLOWING:
- 1) DOMESTIC WATER SERVICE AND SUPPLY PIPING, INCLUDING CONNECTIONS TO EXISTING SITE WATER DISTRIBUTION SYSTEM, ALL REQUIRED VALVES AND METERS. CONNECTIONS TO PLUMBING FIXTURES AND EQUIPMENT.
- 2) PLUMBING FIXTURES
- 3) EXCAVATION AND BACKFILLING

#### 3. COORDINATION

- A. COORDINATE WITH OTHER TRADES AS NECESSARY TO FACILITATE TIMELY COMPLETION.
- B. FURNISH TO OTHER AFFECTED TRADES ALL NECESSARY INFORMATION, WORKING DRAWINGS OR MATERIALS REQUIRED FOR INSTALLATION AND COMPLETION OF ALL WORK.
- C. COORDINATE THE WORK OF ALL SUBMITTALS FOR THE PURPOSE OF INSURING THAT NO CONFLICT EXISTS WITH THE INSTALLATIONS TO BE MADE BY OTHER ENTITIES, WITH FIELD CONDITIONS AND THE INTENDED OPERATION INCLUDING THE CAPABILITY OF PERFORMING ROUTINE AND MAJOR MAINTENANCE OF ALL COMPONENTS OF THE INSTALLATIONS.

#### 4. SUBMITTALS

- 1) CATALOG CUTS SHALL BE REFERENCED TO THE SPECIFICATIONS SECTION AND LOCATION WHERE THE ITEM IS TO BE USED.
- 2) INCLUDE ON EACH LAYOUT WORKING DRAWING, A CERTIFICATION THAT ALL RELATED CONDITIONS HAVE BEEN CHECKED WITH ALL TRADES. AND THAT NO CONFLICT EXISTS. WORKING DRAWING SUBMISSIONS WILL NOT BE APPROVED WITHOUT SUCH CERTIFICATION.
- 3) SUBMIT TO THE ENGINEER, FOR APPROVAL, A LIST OF ALL MATERIAL AND EQUIPMENT MANUFACTURERS WHOSE PRODUCTS ARE PROPOSED, INCLUDING ALL DELIVERY DATES.
- 4) MAKE ALL SUBMITTALS SUFFICIENTLY IN ADVANCE OF FIELD REQUIREMENTS TO ALLOW AMPLE TIME FOR CHECKING, NO CLAIM FOR EXTENSION OF TIME WILL BE GRANTED BY REASON OF FAILURE IN THIS RESPECT AND NO WORK IN THE FIELD MAY BE STARTED WITHOUT APPROVED SHOP DRAWINGS AND THE ENGINEER'S APPROVAL.
- 5) APPROVAL OF ANY SUBMITTAL SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF FURNISHING MATERIALS AND SYSTEMS OF PROPER DIMENSIONS, CAPACITIES, SIZES, QUANTITIES, QUALITY AND INSTALLATION DETAILS, TO EFFICIENTLY PERFORM THE REQUIREMENTS AND INTENT OF THE CONTRACT DOCUMENTS, SUCH APPROVAL SHALL NOT RELIEVE THIS CONTRACTOR FROM THE RESPONSIBILITY FOR ERRORS IN SUBMITTALS
- 6) IF THE SUBMITTALS DIFFER FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, MAKE SPECIFIC MENTION OF SUCH DIFFERENCE IN LETTERS OF TRANSMITTAL. WITH A REQUEST FOR SUBSTITUTION, TOGETHER WITH REASONS THEREFORE, SO THAT, IF ACCEPTABLE, SUITABLE ACTION MAY BE TAKEN FOR PROPER ADJUSTMENT, FAILING THIS, THE CONTRACTOR WILL NOT BE RELIEVED OF THE RESPONSIBILITY FOR EXECUTING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 7) REFER TO ARCHITECTURE SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS.

### **B. WORKING DRAWINGS**

- 1) PIPING LOCATION LAYOUTS, INCLUDING METHOD AND LOCATION OF
- 2) EQUIPMENT LOCATION DETAILS.
- C. CATALOG CUTS AND BROCHURES
- 1) PIPE AND FITTINGS.
- 2) METERS
- 3) VALVES.
- 4) FIXTURES AND TRIM.

### 5. MATERIALS, DELIVERY, STORAGE AND HANDLING

- A. DELIVER MATERIALS IN MANUFACTURER'S ORIGINAL UNOPENED PROTECTIVE PACKAGING.
- B. STORE MATERIALS IN ORIGINAL PACKAGING IN A MANNER TO PREVENT SOILING, PHYSICAL DAMAGE, WETTING OR CORROSION PRIOR TO INSTALLATION.
- C. HANDLE IN A MANNER TO PREVENT DAMAGE TO FINISHED SURFACES. WHERE POSSIBLE, MAINTAIN PROTECTIVE COVERINGS UNTIL INSTALLATION IS COMPLETE AND REMOVE SUCH COVERS AS PART OF FINAL CLEAN-UP.

#### 6. INSPECTION

A. ALL MATERIALS AND EQUIPMENT DELIVERED TO THE SITE WILL BE INSPECTED. MATERIAL AND EQUIPMENT THAT IS DEFECTIVE OR FAILS TO CONFORM TO THE REQUIREMENTS OF THESE SPECIFICATIONS SHALL BE REMOVED IMMEDIATELY FROM THE CONSTRUCTION SITE AND REPLACED WITH NEW MATERIAL AND EQUIPMENT SATISFACTORY TO THE ENGINEER.

#### 7. EXCAVATION AND BACKFILLING

- A. PERFORM EXCAVATION AND BACKFILL REQUIRED FOR INSTALLATION OF UNDERGROUND WORK UNDER THIS CONTRACT. TRENCHES SHALL BE OF SUFFICIENT WIDTH. CRIB OR BRACE TRENCHES TO PREVENT CAVE-IN OR SETTLEMENT. DO NOT EXCAVATE TRENCHES CLOSE TO EXISTING BUILDING FOUNDATION WITHOUT PRIOR CONSULTATION WITH THE ARCHITECT. USE PUMPING EQUIPMENT IF REQUIRED TO KEEP TRENCHES FREE OF WATER, BACKFILL TRENCHES IN MAXIMUM 6" LAYERS OF WELL-TAMPED DRY EARTH IN A MANNER TO PREVENT FUTURE SETTLEMENT.
- B. EXCAVATION AS HEREIN SPECIFIED SHALL BE CLASSIFIED AS COMMON EXCAVATION. COMMON EXCAVATION SHALL COMPRISE THE SATISFACTORY REMOVAL AND DISPOSITION OF MATERIAL OF WHATEVER SUBSTANCES AND OF EVERY DESCRIPTION ENCOUNTERED. INCLUDING ROCK, IF ANY, WITHIN THE LIMITS OF THE WORK AS SPECIFIED AND SHOWN ON THE DRAWINGS. EXCAVATION SHALL BE PERFORMED TO THE LINES AND GRADES INDICATED ON THE DRAWINGS. EXCAVATED MATERIALS WHICH ARE CONSIDERED UNSUITABLE FOR BACKFILL, AND SURPLUS OF EXCAVATED MATERIAL WHICH IS NOT REQUIRED FOR BACKFILL, SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE AND RESPONSIBILITY, AND TO THE SATISFACTION OF THE ARCHITECT.

#### 8. RECORD DRAWINGS

A. FURNISH TO THE ENGINEER A COPY OF EACH APPLICABLE CONTRACT DRAWING AND CADD DISK NEATLY MARKED UP INDICATING THE ACTUAL FINAL. INSTALLATION INCLUDING ALL DEVIATIONS OR REVISIONS NOT SHOWN ON THE ISSUED SET

### 9. TESTS

- 1) PERFORM TESTS AS HEREIN SPECIFIED ON THE VARIOUS PIPING SYSTEMS OR PORTIONS THEREOF PRIOR TO PAINTING, CONCEALING OR INSULATING.
- 2) NOTIFY THE ENGINEER AND REPRESENTATIVES OF AGENCIES OR OTHER ENTITIES WHICH WOULD HAVE JURISDICTION AT LEAST 48 HOURS IN ADVANCE OF MAKING THE REQUIRED TESTS, SO THAT ARRANGEMENTS MAY BE MADE FOR THEIR PRESENCE TO WITNESS THE TESTS.
- 3) FURNISH AND INSTALL ALL DEVICES, MATERIALS, SUPPLIES, LABOR AND POWER REQUIRED IN CONNECTION WITH TESTS. MAKE ALL TESTS IN THE PRESENCE AND TO THE SATISFACTION OF THE ENGINEER AND REPRESENTATIVES OF THE AFORESAID AGENCIES OR OTHER ENTITIES.
- 4) SHOULD THE TESTS REVEAL ANY LEAKS OR OTHER EVIDENCE OF UNSATISFACTORY MATERIALS OR WORKMANSHIP, MAKE NECESSARY REPAIRS IMMEDIATELY, OR, IF REQUIRED BY THE ENGINEER, REPLACE DEFECTIVE WORK WITH NEW WORK WITHOUT ADDITIONAL COST TO THE AUTHORITY, REPEAT TESTS AS DIRECTED UNTIL THE ENTIRE INSTALLATION IS PROVEN SATISFACTORY. NO TEMPORARY METHOD OF REPAIRING LEAKS WILL BE PERMITTED.
- 5) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PROPERTY OR INSTALLATION DAMAGED BY THE TESTS AND SHALL RESTORE THE DAMAGED ITEMS TO THEIR ORIGINAL CONDITION OR REPLACE THEM WITH NEW ITEMS.
- 6) DISPOSE OF WATER REMOVED FROM PIPE LINES IN A MANNER THAT WILL NOT CAUSE DAMAGE TO ANY PROPERTY.
- 7) PROVIDE AND INSTALL THE REQUIRED AIR VENTS IN THE PIPING
- 8) ALL EQUIPMENT, CONTROLS, INSTRUMENTS AND VALVES SHALL BE ISOLATED FROM THE PIPING SYSTEM DURING TEST.

### B. PLUMBING

1) DOMESTIC WATER: CAP OR PLUG ALL OUTLETS, APPLY A HYDROSTATIC PRESSURE OF 125 PSI AND SUSTAIN SUCH PRESSURE FOR ONE HOUR OR PERFORM TESTS AS REQUIRED BY LOCAL WATER COMPANY STANDARDS.

### 10. PRODUCTS

A. MANUFACTURER'S NAME AND NUMBERS ARE USED TO IDENTIFY THE TYPE AND QUALITY OF PRODUCTS REQUIRED, HOWEVER, PRODUCTS OF OTHER MANUFACTURERS WHICH ARE SIMILAR AND EQUAL MAY BE SUBMITTED FOR APPROVAL.

### 11. UTILITY CONNECTIONS

- A. PROVIDE UTILITY CONNECTIONS REQUIRED AND INDICATED ON THE DRAWINGS. INSTALL EXTERIOR CONNECTIONS TO "MAINS" AND EXISTING SERVICE LINES COMPLETE AND FUNCTIONING, IN COMPLIANCE WITH THE REQUIREMENTS OF THE CODES HAVING JURISDICTION AND THE SERVING UTILITY INVOLVED. VERIFY THE EXACT LOCATION OF UTILITY MAINS, SERVICE LINES, AND CONNECTION POINTS REQUIRING CONNECTION IN THE FIELD PRIOR TO INSTALLATION. WORK IN CONJUNCTION WITH THE UTILITY INVOLVED IN THE INSTALLATION OF SERVICES. VERIFY THAT INSTALLATION WILL TIE INTO THE EXISTING UTILITY MAINS, SERVICE LINES, AND CONNECTION POINTS AT THE INDICATED INVERT ELEVATION POINT PRIOR TO INSTALLATION. IF THE INSTALLATION WILL NOT TIE INTO THE INDICATED INVERT ELEVATION POINT WHILE MAINTAINING PROPER FALL, NOTIFY THE ARCHITECT AND THE ENGINEER SO THAT AN ALTERNATIVE MAY BE DETERMINED.
- B. PROVIDE SERVICE PIPING AND ACCESSORIES REQUIRED TO COMPLETE UTILITY CONNECTIONS THAT ARE NOT FURNISHED BY THE SERVING UTILITY. COORDINATE WITH THE SERVING UTILITY COMPANY REGARDING ITEMS FURNISHED. WORK PERFORMED, AND PERMITS AND INSPECTIONS REQUIRED. PAY ASSOCIATED FEES OR CHARGES.
- C. PROVIDE A DOMESTIC WATER SERVICE CONNECTION FROM POST HYDRANT TO MUNICIPAL WATER MAIN AS INDICATED ON THE DRAWINGS, INCLUDING METER. BYPASS, AND VALVES IN AN APPROVED METER PIT.

#### 12. VALVES

PLUMBING SYSTEM VALVES SHALL BE DESIGNED FOR 125 PSI STEAM WORKING PRESSURE AND 200 PSI COLD WATER PRESSURE. INSTALL VALVES COLD WATER LINES AT THE CONNECTIONS OF EQUIPMENT.

#### 1) DOMESTIC WATER

- A. GATE VALVES 2" AND SMALLER: CLASS 125, RISING STEM, SOLDERED LEAD FREE CAST BRONZE BODY AND PARTS, SWEAT ENDS, WITH WEDGE DISC. BY APOLLO # 102S-LF, HAMMOND # UP-668, MILWAUKEE # UP668 OR NIBCO # S-113-LF. PROVIDE CURB VALVE AS REQUIRED BY LOCAL WATER COMPANY
- B. BALL VALVES 2" AND SMALLER: (MAY BE USED IN LIEU OF GATE VALVES UP TO 2")CLASS 150, TWO PIECE LEAD FREE CAST BRONZE BODY, WITH SWEAT ENDS, CHROME PLATED BRONZE BALL WITH CONVENTIONAL PORT, 600 PSI, BLOW-OUT PROOF STEM BY APOLLO # 70-LF-200, HAMMOND # UP8501 MILWAUKEE # UPBA-150.

#### A THREADED JOINTS

1) SCREWED JOINTS SHALL BE MADE TIGHT WITHOUT THE USE OF WICKING TEFLON TAPE AND/OR COMPOUND SUITABLE FOR THE TYPE OF SERVICE SHALL BE APPLIED TO MALE THREADS ONLY.

#### B. FLANGED JOINTS

1) MAKE UP SQUARE AND TIGHT WITH GASKETS 1/16" THICK FULL FLAT FACED, CUT FROM SERVICE SHEET PACKING. DIP BOLTS AND NUTS IN MIXTURE OF GRAPHITE AND OIL IMMEDIATELY PRIOR TO INSTALLATION

#### C. SOLDER JOINTS

1) 95-5 TIN ANTIMONY SOLDER HAVING A MELTING POINT GREATER THAN 450°F. EXCESS SOLDER SHALL BE REMOVED WHILE STILL IN A MOLTEN STATE WITH A FILLET LEFT AT THE FACE OF THE FITTING. INTERNAL PARTS OF VALVES SHALL BE REMOVED BEFORE SOLDERING.

#### 14. PIPING

- A. INSTALL PIPING AS INDICATED ON THE CONTRACT DRAWINGS AND AS DIRECTED DURING INSTALLATION, STRAIGHT AND DIRECT AS POSSIBLE, FORMING RIGHT ANGLES OR PARALLEL LINES WITH BUILDING WALLS, NEATLY SPACED, RISERS PLUMB AND TRUE, AND AVOID INTERFERENCE WITH OTHER CONSTRUCTION.
- B. PIPING SHALL PITCH BACK TOWARD SYSTEM DRAIN VALVE AND ANY INSTALLED LOW POINTS OR POCKETS SHALL HAVE A HOSE END DRAIN
- C. AVOID TOOL MARKS AND UNNECESSARY PIPE THREADS. BURRS FORMED WHEN CUTTING PIPE SHALL BE REMOVED BY REAMING. BEFORE INSTALLING PIPE, THOROUGHLY CLEAN THE INSIDE FREE OF CUTTINGS AND FOREIGN MATTER. CUT ALL PIPE SQUARE AND SMOOTH; MAKE UP ALL JOINTS TO REQUIRED LIMITS.
- D. ERECT ALL PIPING TO OBTAIN SUFFICIENT FLEXIBILITY TO PREVENT EXCESSIVE STRESSES IN MATERIALS AND EXCESSIVE BENDING MOMENTS AT JOINTS OR CONNECTIONS.
- E. MAKE CHANGES IN PIPE SIZE BY THE USE OF REDUCING FITTINGS. DO NOT USE REDUCING BUSHINGS EXCEPT BY APPROVAL OF THE ENGINEER. DO NOT USE CLOSE OR SHOULDER NIPPLES.
- F. ARRANGE WATER PIPING SO THAT SYSTEM CAN BE COMPLETELY DRAINED. WHERE LINES ARE PURPOSELY PITCHED FOR DRAINAGE, A UNIFORM GRADE SHALL BE MAINTAINED. LINES SHALL BE SO SUPPORTED AS TO PREVENT POCKETING OF LIQUID. NO LINES SHALL HAVE POCKETS DUE TO CHANGES IN ELEVATION.
- G. UNDERGROUND DOMESTIC WATER PIPING 2" AND SMALLER SHALL BE TYPE "K" SOFT TEMPER COPPER TUBING WITH FLARED COPPER ALLOY FITTINGS AND CONNECTIONS, OR TYPE "K" HARD TEMPER COPPER TUBING WITH CONVENTIONAL WROUGHT COPPER FITTINGS AND SILVER SOLDER (SILFOS) JOINTS. INSTALL AS FEW UNDERGROUND COPPER PIPING JOINTS AS POSSIBLE. AT BUILDING SERVICE ENTRANCE, NO JOINTS SHALL BE INSTALLED UNDER OR WITHIN 5 FEET OF THE BUILDING. INSTALL DOMESTIC WATER PIPING BELOW GRADE OUTSIDE BUILDING AT ADEQUATE DEPTH TO PREVENT FREEZING.

### 15. PROTECTION AND CLEANING

- A. PROTECT ENTIRE INSTALLATION FROM DAMAGE DURING CONSTRUCTION AND BE RESPONSIBLE FOR ALL DAMAGE UNTIL FINAL ACCEPTANCE OF THE WORK, ALL PIPES SHALL BE PROTECTED WITH SUITABLE COVERINGS AS SOON AS THEY ARE SET. ALL OPEN ENDS OF PIPES SHALL BE CLOSED BY A PLUG FITTING TO PREVENT OBSTRUCTION AND DAMAGE.
- B. BEFORE FINAL CONNECTIONS ARE MADE AND BEFORE OPERATION OF EQUIPMENT AND PIPING. ALL PIPING SHALL BE THOROUGHLY BLOWN OUT. RODDED OUT, OR WASHED OUT AT LEAST TWICE IN A MANNER AS DIRECTED AND/OR APPROVED BY THE ENGINEER, TO REMOVE ALL ACCUMULATION OF DIRT, CHIPS OR OTHER DELETERIOUS MATERIAL. MAKE ALL TEMPORARY CONNECTIONS AND FURNISH ALL APPLIANCES REQUIRED FOR THE PURPOSE OF CLEANING.

### 16. PLUMBING FIXTURES & TRIM

- A. FIXTURES SHALL BE OF THE FIRST QUALITY AS FABRICATED BY A MANUFACTURER OF ESTABLISHED REPUTATION.
- B. UNLESS OTHERWISE NOTED BY THE ARCHITECT, PLUMBING FIXTURES SHALL SCHEDULED ON PLANS.

#### 18. EXECUTION

#### A. INSTALLATION

- PROTECT PLUMBING FIXTURES INCLUDED IN THESE SPECIFICATIONS AGAINST INJURY FROM THE BUILDING MATERIALS, ACIDS, TOOLS
- 2) PLATED OR POLISHED FITTINGS, PIPES AND APPLIANCES SHALL BE COATED WITH VASELINE, IMMEDIATELY AFTER INSTALLATION AND SHALL BE FINALLY POLISHED AND FREED FROM ALL MARKS AND FOREIGN SUBSTANCES, WHEN DIRECTED BY THE ARCHITECT.
- 3) PRIOR TO BUILDING'S ACCEPTANCE BY THE OWNER, REMOVE MANUFACTURERS' LABELS AND THOROUGHLY CLEAN ALL
- FIXTURES AND MAKE READY FOR USE BY BUILDING'S OCCUPANTS. 4) SET FIXTURE HEIGHTS AS SPECIFIED OR AS DIRECTED BY THE
- 5) THOROUGHLY REVIEW ALL CONTRACT DOCUMENTS AND DETERMINE EXTENT OF MISCELLANEOUS PLUMBING FIXTURES / EQUIPMENT, ETC., SPECIFIED IN OTHER SECTIONS OF THE SPECIFICATIONS AND INCLUDE IN BID PROPOSAL ALL MATERIAL AND LABOR REQUIRED TO INSTALL THE ITEMS SPECIFIED IN OTHER SECTIONS AND/OR CLAIMED BY THIS TRADE.
- 6) PLUMBING CONTRACTOR SHALL ARRANGE AND PAY FOR ALL BUILDING DEPARTMENT APPROVALS, FILING, INSPECTIONS AND SHALL FURNISH APPROVAL CARDS AT COMPLETION OF WORK.

#### B. EXCAVATION AND BACKFILL

- 1) PROVIDE EXCAVATION OUTSIDE THE BUILDING FOR THE WORK OF THIS DIVISION. EXCAVATE ALL MATERIAL ENCOUNTERED, TO THE DEPTHS. REQUIRED. REMOVE FROM THE SITE EXCAVATED MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL. PROVIDE GRADING AS MAY BE NECESSARY TO PREVENT SURFACE WATER FROM FLOWING INTO TRENCHES OR OTHER EXCAVATIONS. REMOVE ANY WATER ACCUMULATING THEREIN. PROVIDE SHEETING AND SHORING AS MAY BE NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL.
- 2) PROVIDE TRENCHES OF WIDTHS NECESSARY FOR THE PROPER EXECUTION OF THE WORK. GRADE BOTTOM OF THE TRENCHES ACCURATELY TO PROVIDE UNIFORM BEARING AND SUPPORT THE PIPING ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH. EXCEPT WHERE ROCK IS ENCOUNTERED, DO NOT EXCAVATE BELOW THE DEPTHS INDICATED. WHERE ROCK EXCAVATIONS ARE REQUIRED, EXCAVATE ROCK TO A MINIMUM OVER DEPTH OF FOUR INCHES BELOW THE TRENCH DEPTHS INDICATED ON THE DRAWINGS OR REQUIRED. BACKFILL OVER DEPTHS IN THE ROCK EXCAVATION AND UNAUTHORIZED OVERDEPTHS WITH LOOSE, GRANULAR, MOIST EARTH, THOROUGHLY MACHINE TAMPED TO A COMPACTION LEVEL OF AT LEAST 95% TO STANDARD PROCTOR DENSITY OR 75% RELATIVE DENSITY OR AS SPECIFIED BY THE ARCHITECT. WHENEVER UNSTABLE SOIL THAT IS INCAPABLE OF PROPERLY SUPPORTING THE WORK, AS DETERMINED BY THE ARCHITECT, IS ENCOUNTERED IN THE BOTTOM OF THE TRENCH, REMOVE SOIL TO A DEPTH REQUIRED AND BACKFILL THE TRENCH TO THE PROPER GRADE WITH COARSE SAND, FINE GRAVEL OR OTHER SUITABLE MATERIAL.
- 3) EXCAVATE TRENCHES FOR UTILITIES THAT WILL PROVIDE THE REQUIRED MINIMUM DEPTHS OF COVER FROM EXISTING GRADE OR FROM INDICATED FINISHED GRADE, WHICHEVER IS LOWER, UNLESS OTHER-WISE SPECIFICALLY SHOWN.
- TRENCHES SHOULD NOT BE PLACED WITHIN TEN FEET OF FOUNDATION OR SOIL SURFACES WHICH MUST RESIST HORIZONTAL FORCES OR WITHIN THE ANGLE OF REPOSE OF SUCH FOUNDATIONS AND SOIL SURFACES.
- 5) DO NOT BACKFILL TRENCHES UNTIL ALL REQUIRED TESTS HAVE BEEN PERFORMED AND THE INSTALLATION OBSERVED BY THE ENGINEER, COMPLY WITH THE REQUIREMENTS OF OTHER SECTIONS OF THESE SPECIFICATIONS. BACKFILL SHOULD CONSIST OF NON-EXPANSIVE SOIL WITH LIMITED POROSITY. DEPOSIT IN LAYERS AND THOROUGHLY AND CAREFULLY TAMP UNTIL COMPLETE. UNIFORMLY GRADE THE FINISHED SURFACE.

### 19. DISINFECTION OF POTABLE WATER SYSTEMS

- A. NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED PRIOR TO UTILIZATION. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEATH AUTHORITY OR WATER PURVEYOR HAVING JURISDICTION OR. IN THE ABSENCE OF A PRESCRIBED METHOD. THE PROCEDURE DESCRIBED IN EITHER AWWA C651 OR AWWA C652, OR AS DESCRIBED IN THIS SECTION. THIS REQUIREMENT SHALL APPLY TO "ON-SITE" OR "IMPLANT" FABRICATION OF A SYSTEM OR TO A MODULAR PORTION OF A
  - 1. THE PIPE SYSTEM SHALL BE FLUSHED WITH CLEAN, POTABLE WATER UNTIL DIRTY WATER DOES NOT APPEAR AT THE POINTS OF OUTLET.
- 2. THE SYSTEM OR PART THEREOF SHALL BE FILLED WITH A WATER-CHLORINE SOLUTION CONTAINING AT LEAST 50 PARTS PER MILLION OF CHLORINE AND THE SYSTEM OR PART THEREOF SHALL BE VALVED OFF AND ALLOWED TO STAND FOR 24 HR. OR, THE SYSTEM OR PART THEREOF SHALL BE FILLED WITH A WATER-CHLORINE SOLUTION CONTAINING AT LEAST 200 PARTS PER MILLION OF CHLORINE AND ALLOW TO STAND FOR 3 HR.
- FOLLOWING THE REQUIRED STANDING TIME, THE SYSTEM SHALL BE FLUSHED WITH CLEAN POTABLE WATER THE CHLORINE IS PURGED FROM THE SYSTEM.
- 4. THE PROCEDURE SHALL BE REPEATED WHERE SHOWN BY A BACTERIOLOGICAL EXAMINATION THAT CONTAMINATION REMAINS PRESENT IN THE SYSTEM.

NJ Professional Engineer

Orawn By AJS / AH Checked By VF

10.01.2017 Revisions.

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roject No 1220 Drawing Title **ELECT & PLUMBING** PLUMBING

**SPECIFICATIONS** File Name 8631EP02

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CONSULTING ENGINEERS

- C -

DOWN TO CIRCUITING BELOW SEE 2/EP1.1 - 2#12+1#12G-3/4" RGS (TYP)

- B -ALTERNATE #1 (2)1"C SPARE UNDERGROUND CONDUITS PROVIDE 4#8 & 1#10 GRD- 1 "C UNDERGROUND TO ELECTRICAL ENCLOSURE -TO ELECTRICAL ENCLOSURE. SEE 1/EP-2.1. 12"x12"x4"D NEMA 4X WEATHERPROOF, LOCKABLE, GASKETTED STAINLESS STEEL BOX BY HOFFMAN OR APPROVED EQUAL — UP TO LIGHTING ABOVE SEE 2/EP1.1 - C -POST HYDRANT REFER TO 6/EP-2.1 WATER METER PIT REFER TO 5/EP-2.1 — CURB BOX REFER TO 4/EP-2.1 -REFER TO SITE / CIVIL PLAN FOR ROUTING & 5 1" CW (TYP)

- ALTERNATE #1 -

FIRST FLOOR PLAN

## **ELECTRICAL GENERAL NOTES**

- 1 LIGHT FIXTURES AND REMOTE TRANSFORMERS SHALL BE MOUNTED SECURELY TO UNDERSIDE OF STRUCTURAL STEEL
- REFER TO SITE/CIVIL DRAWINGS FOR EXACT LOCATION OF ELECTRICAL ENCLOSURE.
- CONDUIT SHALL BE CONCEALED TO GREATEST EXTENT POSSIBLE, LOCATED ON TOP OR BEHIND BEAMS AND COLUMNS, INSTALLATION DETAIL SHALL BE COORDINATED WITH AND AS DIRECTED BY ARCHITECT IN FIELD.
- 4. PROVIDE HANDHOLE FOR EVERY 100' OF UNDERGROUND CONDUIT RUN.

## PLUMBING GENERAL NOTES

- 1. COORDINATE WATER SERVICE REQUIREMENTS WITH UTILITY COMPANY.
- COORDINATE EXACT LOCATION OF ALL EQUIPMENT WITH SITE/CIVIL DRAWINGS.

Vincent Farese, PE NJ Professional Engineer No. 43960

Drawn By AJS / AH Checked By Date 10.01.2017

RUIN ROGERS HOUSE CONSTRUCTED
MERCER COUNTY PARK

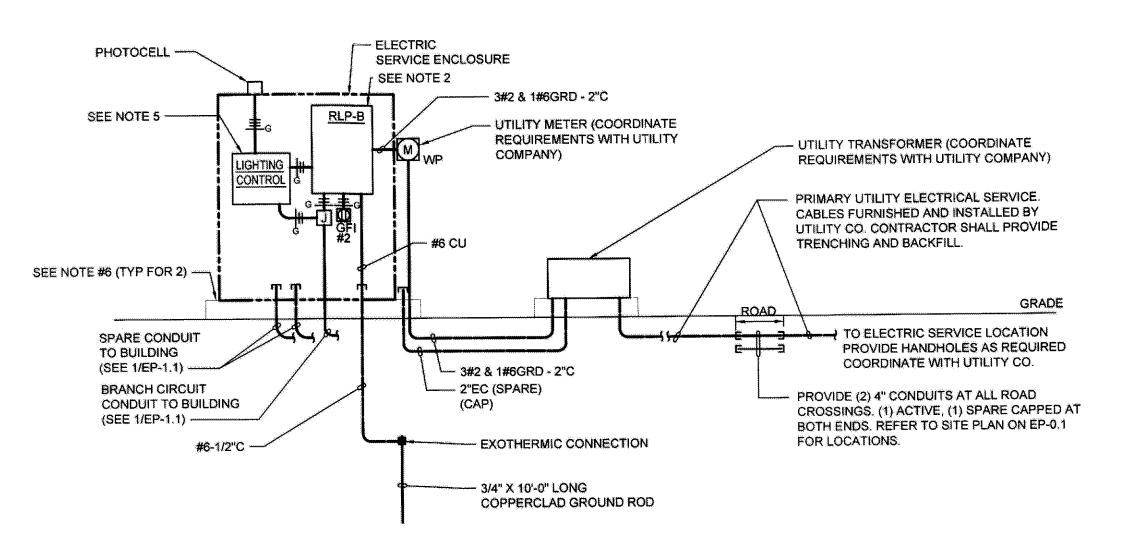
1220 Drawing Title ELECT & PLUMBING: FLOOR PLANS

File Name 8631EP02

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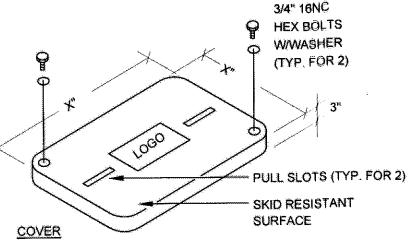
----+*f*-3'-0" -----ELECTRIC SERVICE ENCLOSURE----12" MIN ABOVE GRADE GRADE

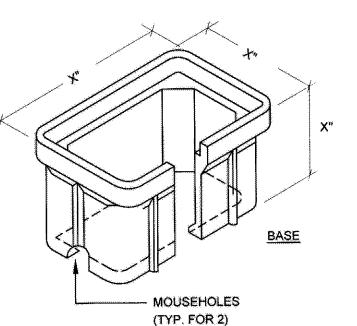
ELECTRICAL RISER DIAGRAM

- THE DISTRIBUTION SYSTEM SHALL BE COMPLETELY AND PROPERLY GROUNDED USING APPROVED FITTINGS. ALL CONDUCTING WIRE ENCLOSURES SHALL BE SECURELY BONDED TOGETHER SO THAT EVERY CONDUCTING COMPONENT IS PROVIDED WITH A LOW RESISTANCE PATH TO GROUND. SEPARATE INSULATED GROUND CONDUCTORS SHALL BE RUN WITH ALL FEEDERS, RECEPTACLE BRANCH CIRCUITS AND CIRCUITS FEEDING LIGHTING FIXTURES AND EQUIPMENT
- MOUNT PANEL ON UNI-STRUT CHANNELS SO FRONT FACE OF PANELBOARD IS FLUSH WITH ENCLOSURE
- REFER TO SITE PLAN FOR EXACT LOCATION AND ROUTING OF FEEDERS.
- COORDINATE ELECTRIC SERVICE REQUIREMENTS WITH UTILITY COMPANY PRIOR TO INSTALLATION.
- PROVIDE LIGHTING CONTROL PANEL SIMILAR TO TORK #DLC400BP WITH PHOTOCELL INCLUDED. COORDINATE PROGRAMMING AND TIME SCHEDULE WITH OWNER.
- PROVIDE 4" REINFORCED CONCRETE PAD FOR ELECTRICAL EQUIPMENT ENCLOSURE AND UTILITY TRANSFORMER, CONCRETE PAD SHALL BE A MINIMUM OF 6" LARGER THAN FOOTPRINT OF EQUIPMENT

# ELECTRIC SERVICE ENCLOSURE

- 1. ENCLOSURES SHALL BE MINIMUM FLOOR MOUNTED, 12 GAUGE STAINLESS STEEL, NEMA 4X WITH GASKETED AND LOCKABLE DOORS. HOFFMAN #A74H7218SSLP3PT OR EQUAL.
- 2. COORDINATE EXACT DIMENSIONS AND SPECIFICATIONS OF EQUIPMENT PAD WITH SITE / CIVIL DRAWINGS.

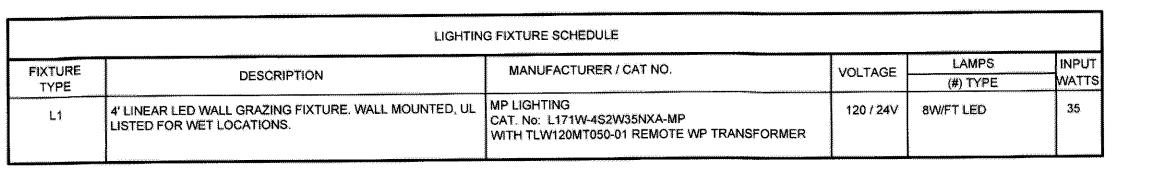


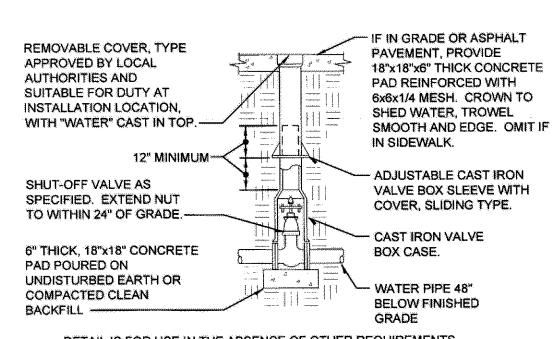


# TYPICAL HANDHOLE DETAIL

- 1. LENGTH, WIDTH, AND DEPTH (X") SHALL BE AS REQUIRED, MIN. 18" X 18" X 18".
- CONTRACTOR SHALL PROVIDE EXTENSION BOXES AS REQUIRED.
- PROVIDE CRUSHED STONE BELOW HANDHOLE FOR DRAINAGE.
- 4. COVER SHALL BE IDENTIFIED AS REQUIRED ("ELECTRIC", "SITE LIGHTING", "TELECOM", ETC.)
- HANDHOLE SHALL BE POLYMER CONCRETE WITH OPEN BOTTOM WITH MOUSE HOLES. QUAZITE #PGSTYLE OR APPROVED EQUAL. COORDINATE DEPTH OF HANDHOLES WITH INSTALLATION DETAILS AND EXISTING CONDITIONS IN
- 6. PROVIDE MINIMUM 12" DEEP (AND 6" WIDER ON THE SIDES) GRAVEL BED BELOW HANDHOLE

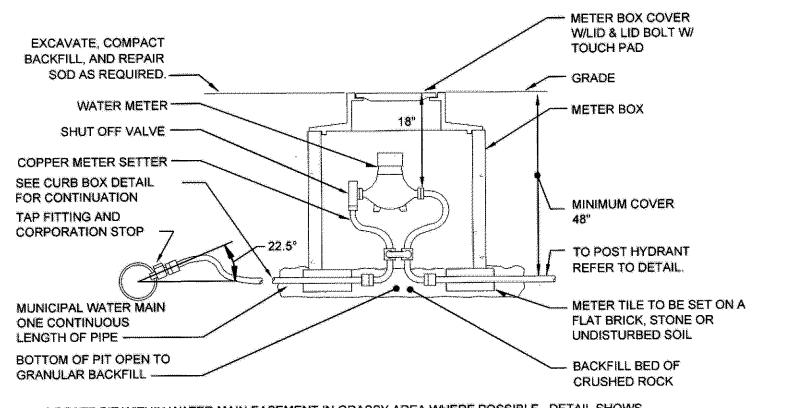
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										AMPS	= 2.5 A





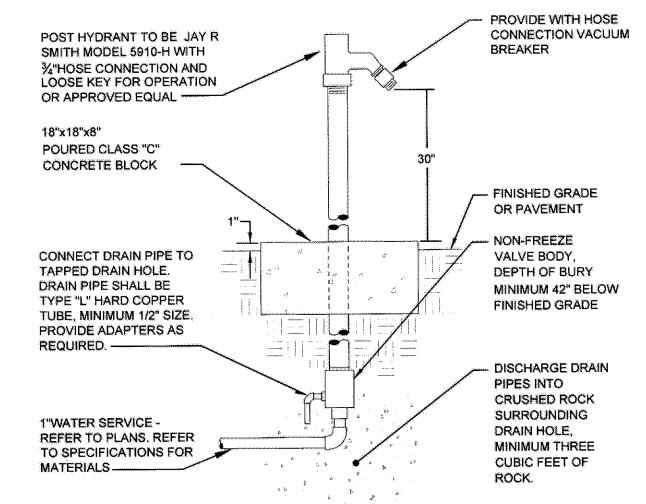
DETAIL IS FOR USE IN THE ABSENCE OF OTHER REQUIREMENTS BY LOCAL UTILITY COMPANY, CODES AND AUTHORITIES, OR MUNICIPAL PUBLIC WORKS DEPARTMENT ~ VERIFY.

4 CURB BOX INSTALLATION
NOT TO SCALE



LOCATE PIT WITHIN WATER MAIN EASEMENT IN GRASSY AREA WHERE POSSIBLE. DETAIL SHOWS GENERAL SCHEMATIC REQUIREMENTS. CONTRACTOR SHALL OBTAIN PLANS AND SPECIFICATIONS FROM LOCAL MUNICIPAL WATER COMPANY. INSTALL ITEMS FURNISHED BY WATER COMPANY. PAY ANY FEES REQUIRED BY WATER COMPANY. FURNISH AND INSTALL ITEMS NOT PROVIDED BY WATER COMPANY. VERIFY EXCAVATION REQUIREMENTS WITH SITE EXAMINATION OR GEOTECHNICAL REPORT.

MATER METER PIT INSTALLATION
NOT TO SCALE



PIPING ARRANGEMENT IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. INSTALL PER MANUFACTURER'S INSTRUCTIONS. VERIFY FROST DEPTH AND PROVIDE SUITABLE UNDERGROUND SHAFT LENGTH. INSTALL AT LOCATION(S) SHOWN ON PLANS.

6 POST HYDRANT INSTALLATION NOT TO SCALE

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Drawn By AJS / AH Checked By

10.01.2017 Revisions

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HOUSE MERCER

roject No 1220 Drawing Title

ELECT & PLUMBING: DETAILS, SCHEDULES & RISER

File Name 8631EP21

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