PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL

601 ERNSTON ROAD,
PARLIN, NJ 08859

FOR THE

SAYREVILLE PUBLIC SCHOOLS

298 ERNSTON ROAD, PARLIN, NJ 08859

SUPERINTENDENT:	DR. RICHARD LABBE
BUSINESS ADMINISTRATOR:	MS. ERIN HILL
DOE PROJECT NUMBER:	T.B.D.

B&G ENGINEERING, LLC
SITE/CIVIL ENGINEERS

SPIEZLE ARCHITECTURAL GROUP, INC
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
Phone: 609.695.7400 Fax: 609.394.2274
www.spiezle.com

CODE SUBMISSION:
BID DATE:

LIST OF DRAWINGS

DWG. NO.	TITLE
GENERAL	
CS.1	COVER
SITEWORK	
SW-1	EXISTING CONDITIONS PLAN
SW-2	DEMOLITION PLAN
SW-3	DIMENSION & CIRCULATION PLAN
SW-4	GRADING AND STORMWATER MANAGEMENT PLAN
SW-5	SOIL EROSION AND SEDIMENT CONTROL PLAN
SW-6	SOIL EROSION AND SEDIMENT CONTROL DETAILS
SW-7	CONSTRUCTION DETAILS
SW-8	CONSTRUCTION DETAILS
SW-9	PARKING LOT LIGHTING PLAN
ELECTRICAL	
SE0.0	ELECTRICAL COVER SHEET
SE1.0	ELECTRICAL SITE PLAN

PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL

25K011

DRAWING NUMBER:

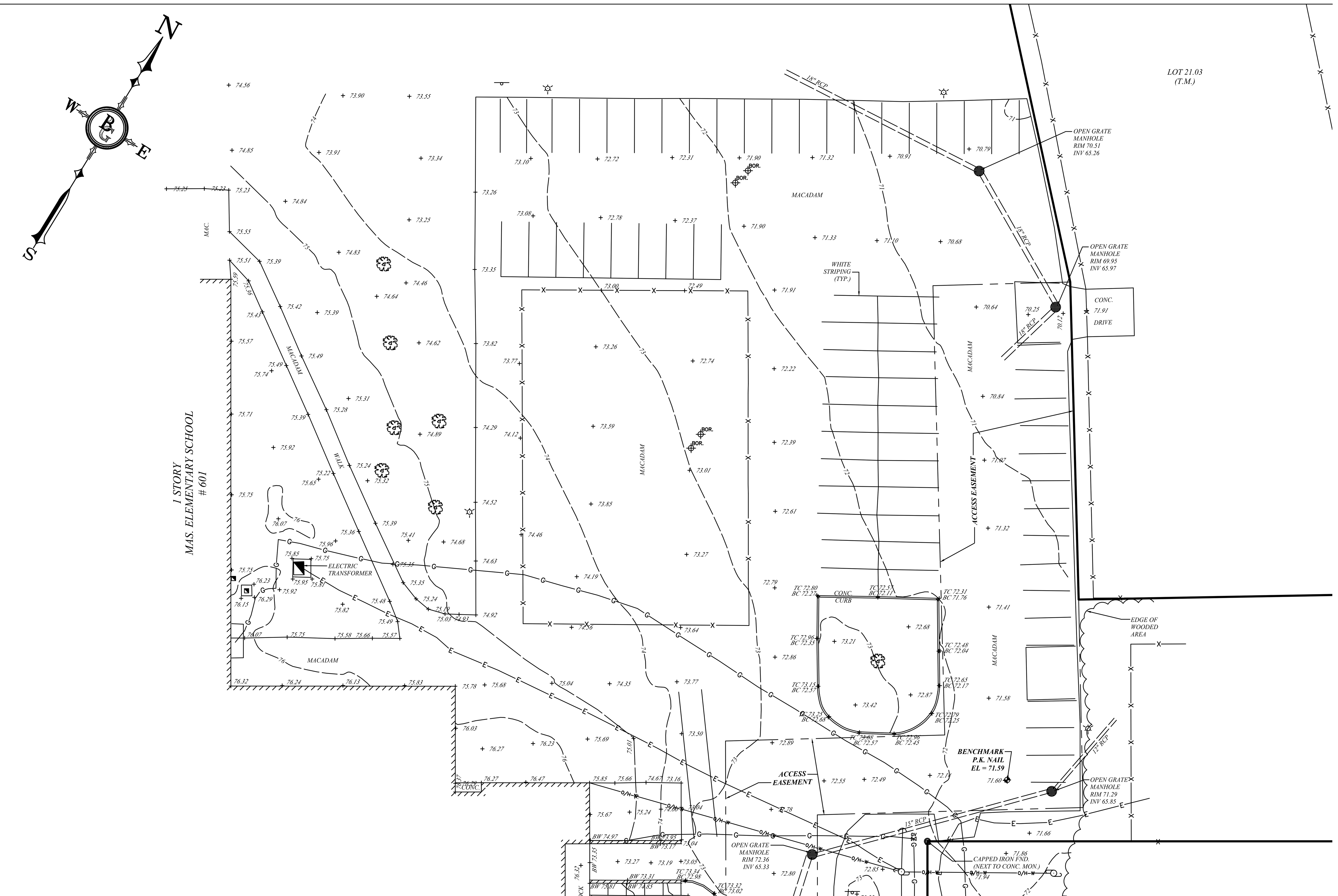
CS.1

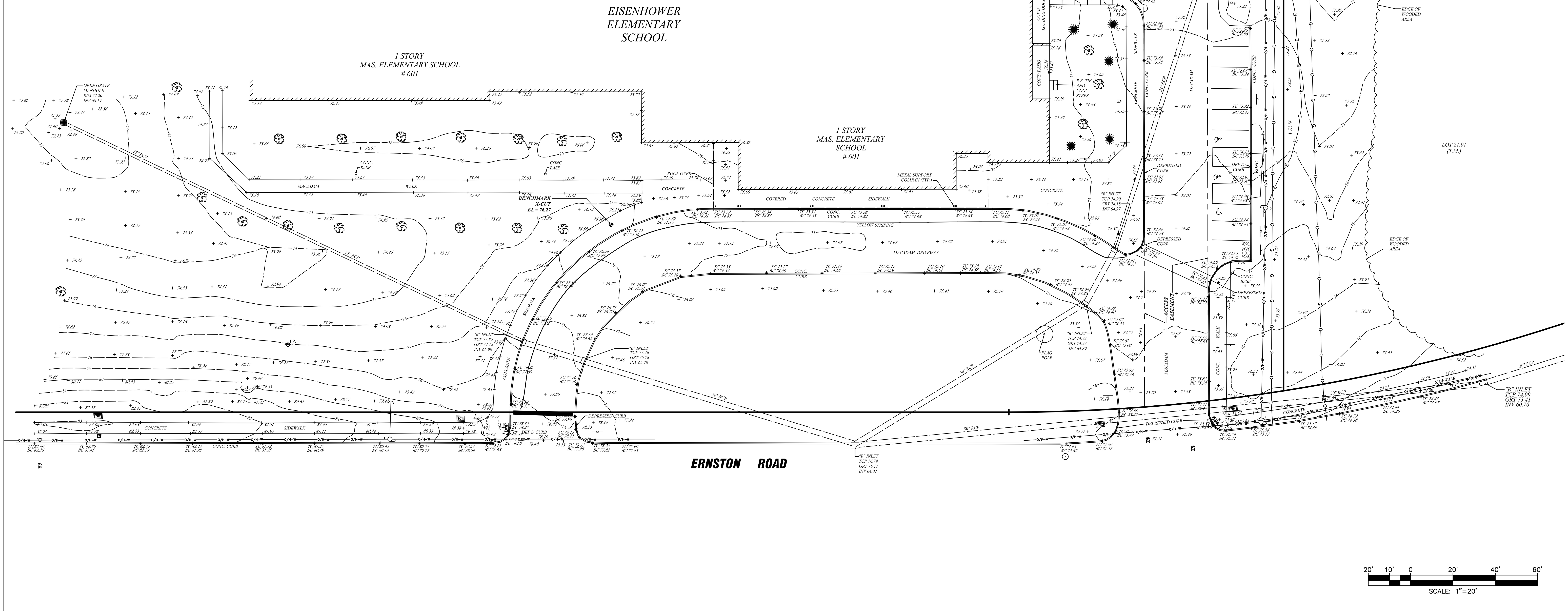
SURVEY GENERAL NOTES:

1. A WRITTEN WAIVER AND DIRECTION NOT TO SET CORNER MARKERS HAS BEEN OBTAINED FROM THE ULTIMATE USER PURSANT TO "P.L. 2003, C.14 (N.J.S.A. 45:8-36.3) AND N.J.A.C. 13:40-5.2(D)."
2. THE UTILITIES SHOWN HAVE BEEN LOCATED FROM EVIDENCE OBSERVED ON THE SURFACE ONLY. THE SURVEYOR MAKES NO GUARANTEES THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
3. LOCATION OF SUB-SURFACE IMPROVEMENTS ARE NOT PART OF THIS SURVEY; EXAMPLE: OIL TANKS, SANITARY-SEPTIC AND CESS POOL SYSTEMS, WELLS, GAS LINES, SEWER LATERALS, WATER MAINS, ETC.
4. RIPARIAN CLAIMS, RIPARIAN RIGHTS AND CONVEYANCE MAP WERE NOT REVIEWED OR CONSIDERED PART OF THIS SURVEY.
5. EXCEPT AS SPECIFICALLY STATED OR SHOWN ON THIS PLAT, THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING WHICH MAY BE APPLICABLE TO THE SUBJECT REAL ESTATE: EASEMENTS, OTHER THAN POSSIBLE EASEMENTS THAT WERE VISIBLE OR ON RECORD AT THE TIME OF THE MAKING OF THIS SURVEY; BUILDING SETBACK LINES; RESTRICTIVE COVENANTS; SUBDIVISION RESTRICTIONS; ZONING OR OTHER LAND USE REGULATIONS AND ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
6. DECLARATION IS MADE TO ORIGINAL PURCHASER OF THE SURVEY. IT IS NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.
7. SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
8. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY.
9. SUBJECT TO ANY AND ALL EASEMENTS OR RESTRICTIONS EITHER RECORDED OR UNRECORDED.
10. THIS SURVEY DOES NOT PURPORT TO REPRESENT OR DETERMINE FLOOD HAZARD AREAS, RIPARIAN ZONES, WETLANDS LOCATION OR BUFFER ZONES, ETC. AS ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY AND/OR THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ARE NOT CONSIDERED PART OF CONTRACTUAL OBLIGATIONS UNDER THIS SURVEY. ULTIMATE USER SHALL SECURE THE SERVICES OF A CERTIFIED ECOLOGIST OR ENGINEER.
11. FLOOD PLAIN MAPS WERE NOT REVIEWED OR CONSIDERED PART OF THIS SURVEY.
12. THE RETRACEMENT OF THE BOUNDARY DEPICTED HEREIN BY THE SURVEYOR IS BASED UPON THE EVIDENCE FOUND AND RECORDED AND THE OPINION OF THE SURVEYOR AS TO THE VALIDITY OF SUCH EVIDENCE, ANY REPRESENTATION HEREIN IS NOT TO PUBLISH DISPARAGEMENT OF TITLE OF THE SUBJECT PROPERTY OR ADJOINING LAND OWNERS. THE ULTIMATE USERS OF THIS SURVEY SHALL HAVE ACKNOWLEDGED THAT THIS SURVEY COULD BE MADE PUBLIC AND THAT THE SURVEYOR AND COMPANY HAVE NO FIDUCIARY DUTY OR CONFIDENTIALITY OBLIGATION TO THE CLIENT OR USERS.
13. THIS SURVEY REPRESENTS A POSITIONAL LOCATION OF RECORDED DEED LINES AND NOT TO REPRESENT OR DETERMINE OWNERSHIP TO ULTIMATE USERS OF THIS SURVEY.
14. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A FULL TITLE ABSTRACT SEARCH. THE SURVEYOR HIGHLY RECOMMENDS TO ALL USERS OF THIS SURVEY THAT A TITLE SEARCH BE PERFORMED REGARDING TAX LOTS 2 & 3, BLOCK 17.04 BEFORE ANY PROPOSED IMPROVEMENTS OR CONSTRUCTION.
15. VERTICAL DATUM IS NAVD88 UTILIZING DUAL FREQ. DIFF. GPS.
16. CONTOUR INTERVAL IS 1.0 FOOT.

LEGEND

"B" INLET	▭
UTILITY BOXES	◩
HYDRANT	
SIGN	
BOOK SHARE	
LIGHT	
UTILITY POLE	
GUY ANCHOR	
GAS VALVE	GV ⋈
WATER VALVE	WV ⋈
BENCHMARK	⊕
TEST PIT	⊕ T.P.
DETECTABLE WARNING PAD	DWP
DOT BOX	DOT
GAS LINE (U/G)	—G—G—
ELECTRIC (U/G)	—E—E—
WIRES (UNDERGROUND)	—U/G-W—
WIRES (OVERHEAD)	—O/H-W—
CHAIN LINK FENCE	—X—X—
CONC. WALL	▨
CONIFEROUS TREE	
DECIDUOUS TREE	





CODE REVIEW:

CERTIFICATE:

spiezle

SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

SIGNATURE:

THOMAS S. PERRINO	21AI01505400
SCOTT E. DOWNIE	21AI01674400
STEVEN LEONE	21AI01170100
STEVEN G. SIEGEL	21AI01564200
ANGELO ALBERTO	21AI01046700
JOHN F. WRIGHT	21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC.	21AC00063000

SEAL:

CONSULTANTS:

B&G Engineering LLC
State of N.J. Certificate of Authorization: 24GA28168000
30 BERNARD DRIVE
EWING, N.J. 08628
Phone (732) 598-6616
Fax (609) 671-0715

BESRICK G. PLUMMER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 39534

PROJECT:

PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL

601 ERNSTON ROAD, PARLIN, NJ 08859
LOT 2102, BLOCK 447.06
BOROUGH OF SAYREVILLE,
MIDDLESEX COUNTY, NJ
FOR

SAYREVILLE PUBLIC SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW:

REVISIONS:

#	REVISION NAME	DATE

FOR BID:

DRAWING TITLE:

EXISTING CONDITIONS PLAN

COMMISSION NUMBER:
25K011

B&G PROJECT NO.: 2401A

DRAWING NUMBER:
SW-1

THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"x42"

DEMOLITION NOTES

PARKING LOT CONSTRUCTION:

1. ALL ITEMS TO BE DEMOLISHED TO FACILITATE THE PROPOSED WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
2. AT THE END OF EACH WORK DAY, CONTRACTOR SHALL INSTALL STONE IN THE ROADWAY BED, IF SAID ROADWAY'S PAVEMENT HAS BEEN REMOVED TO A DEPTH WHERE THE EARTH SUBBASE IS EXPOSED.
3. THE CONTRACTOR IS TO COORDINATE ADJUSTMENT OF STREET HARDWARE WITH ALL UTILITY COMPANIES PRIOR TO INSTALLATION OF SURFACE COURSE.
4. PARKING LOT ELEVATIONS AND CROSS SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS (SEE GRADING PLAN) AND/OR AS DIRECTED BY ENGINEER.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER TO OBTAIN A CONSTRUCTION STAGING SITE FOR STORAGE OF EQUIPMENT AND MATERIALS. ALL EQUIPMENT & MATERIALS MUST BE REMOVED FROM ANY PUBLIC ROADWAY AT THE END OF EACH WORK DAY.

CURB/SIDEWALK CONSTRUCTION:

6. THE CONTRACTOR IS TO RESET ALL DISTURBED UTILITY VALVES & CLEANOUTS, WITHIN THE PROJECT LIMITS.
7. EXISTING SIDEWALKS, CURBS AND PAVEMENT SURFACES THAT ARE DISTURBED INCIDENTALLY DURING THIS WORK SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO ADDITIONAL COSTS TO THE OWNER.

RESTORATION:

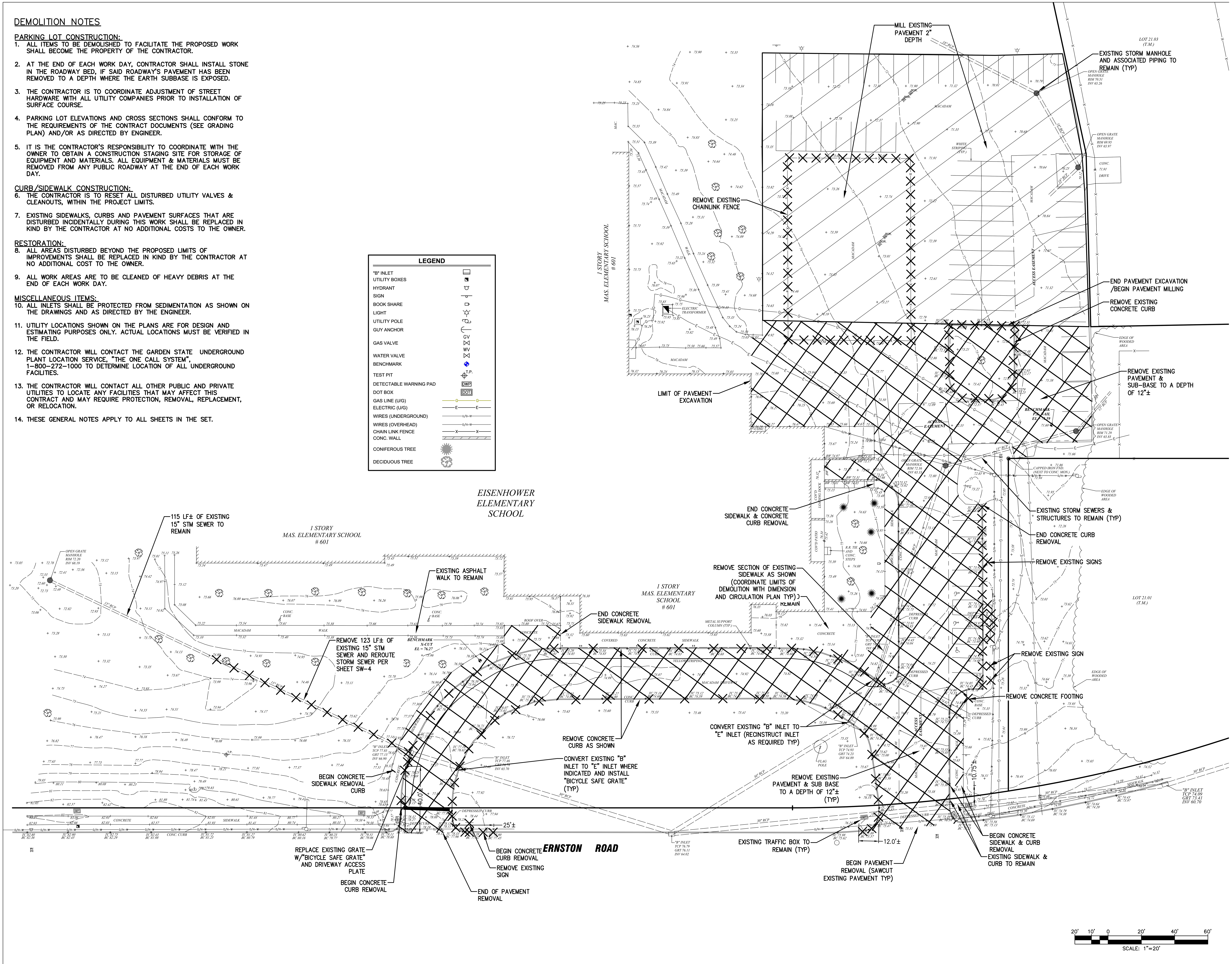
8. ALL AREAS DISTURBED BEYOND THE PROPOSED LIMITS OF IMPROVEMENTS SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
9. ALL WORK AREAS ARE TO BE CLEANED OF HEAVY DEBRIS AT THE END OF EACH WORK DAY.

MISCELLANEOUS ITEMS:

10. ALL INLETS SHALL BE PROTECTED FROM SEDIMENTATION AS SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER.
11. UTILITY LOCATIONS SHOWN ON THE PLANS ARE FOR DESIGN AND ESTIMATING PURPOSES ONLY. ACTUAL LOCATIONS MUST BE VERIFIED IN THE FIELD.
12. THE CONTRACTOR WILL CONTACT THE GARDEN STATE UNDERGROUND PLANT LOCATION SERVICE, "THE ONE CALL SYSTEM", 1-800-272-1000 TO DETERMINE LOCATION OF ALL UNDERGROUND FACILITIES.
13. THE CONTRACTOR WILL CONTACT ALL OTHER PUBLIC AND PRIVATE UTILITIES TO LOCATE ANY FACILITIES THAT MAY AFFECT THIS CONTRACT AND MAY REQUIRE PROTECTION, REMOVAL, REPLACEMENT, OR RELOCATION.
14. THESE GENERAL NOTES APPLY TO ALL SHEETS IN THE SET.

LEGEND

- "B" INLET
- UTILITY BOXES
- HYDRANT
- SIGN
- BOOK SHARE
- LIGHT
- UTILITY POLE
- GUY ANCHOR
- GAS VALVE (GV)
- WATER VALVE (WV)
- BENCHMARK
- TEST PIT (T.P.)
- DETECTABLE WARNING PAD (DWP)
- DOT BOX (DOT)
- GAS LINE (U/G)
- ELECTRIC (U/G)
- WIRES (UNDERGROUND)
- WIRES (OVERHEAD)
- CHAIN LINK FENCE
- CONC. WALL
- CONIFEROUS TREE
- DECIDUOUS TREE



CODE REVIEW:

CERTIFICATE:

spiezle

SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

SIGNATURE:

THOMAS S. PERRINO	21AI01505400
SCOTT E. DOWNIE	21AI01674400
STEVEN LEONE	21AI01170100
STEVEN G. SIEGEL	21AI01564200
ANGELO ALBERTO	21AI01046700
JOHN F. WRIGHT	21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC.	21AC00063000

SEAL:

CONSULTANTS:

B&G Engineering LLC
State of N.J. Certificate of Authorization: 24GA28168000
30 BERNARD DRIVE
EWING, N.J. 08628
Phone (732) 598-6616
Fax (609) 671-0715

BESRICK G. PLUMMER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 39534

PROJECT:
PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL
601 ERNSTON ROAD, PARLIN, NJ 08859
LOT 2102, BLOCK 447.06
BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NJ
FOR

SAYREVILLE PUBLIC SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW:

REVISIONS:

#	REVISION NAME	DATE

FOR BID:

DRAWING TITLE:
DEMOLITION PLAN

COMMISSION NUMBER:
25K011

B&G PROJECT NO.: 2401A

DRAWING NUMBER:
SW-2

THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"x42"

GENERAL NOTES

1. OWNER:
   SAYREVILLE BOARD OF EDUCATION
   298 ERNSTON ROAD
   PARLIN, NJ, 08859

2. THE PROPERTY IS KNOWN AS BLOCK 447.06, LOT 21.02, AS SHOWN ON SHEET 125 OF THE OFFICIAL TAX MAP OF THE BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NEW JERSEY. LAST REVISED FEBRUARY 1991.

3. THE PROPOSED IMPROVEMENTS INCLUDE FULL DEPTH RECONSTRUCTION A SECTION OF RANDOLPHVILLE SCHOOL ACCESS ROAD.

4. THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A PLAN ENTITLED "PARTIAL TOPOGRAPHIC SURVEY, P/O BLOCK 447.06, LOT 2102, EISENHOWER ELEMENTARY SCHOOL, PARLIN, MIDDLESEX COUNTY, NEW JERSEY," PREPARED BY ROBERT L. CIGOL FOR DMC ASSOCIATES INC. ROBERT L. CIGOL NJ LICENSE NO. 24GS04026100
   VERTICAL DATUM IS BASED ON NAVD 1988. HORIZONTAL DATUM IS BASED ON NAD 1983

5. UTILITY RELOCATIONS SHOWN HEREON, IF ANY, ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REPRESENT ALL REQUIRED UTILITY RELOCATIONS. THE CONTRACTORS RESPONSIBLE FOR PERFORMING AND/OR COORDINATING ALL REQUIRED UTILITY RELOCATIONS IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANIES/AUTHORITIES.

6. DO NOT SCALE DRAWINGS AS THEY PERTAIN TO ADJACENT AND SURROUNDING PHYSICAL CONDITIONS, BUILDINGS, STRUCTURES, ETC. THEY ARE SCHEMATIC ONLY, EXCEPT WHERE DIMENSIONS ARE SHOWN THERETO.

7. THIS IS A SITE DEVELOPMENT PLAN AND UNLESS SPECIFICALLY NOTED ELSEWHERE HEREON IS NOT A SURVEY.

8. EXISTING UTILITY INFORMATION SHOWN HERON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS SATISFACTION PRIOR TO EXCAVATION. WHERE EXISTING UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTION, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING INVERTS, MATERIALS AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS.

9. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION FOR SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH:
   A. N.J. DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", 2019; AS SUPPLEMENTED.
   B. CURRENT, PREVAILING MUNICIPAL, COUNTY AND/OR STATE AGENCY SPECIFICATIONS, STANDARDS, CONDITIONS AND REQUIREMENTS.
   C. CURRENT, PREVAILING UTILITY COMPANY/AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
   D. CURRENT MANUFACTURER'S SPECIFICATIONS, STANDARDS AND REQUIREMENTS.

10. PRIOR TO ANY EXCAVATION, CONTRACTORS SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CALLING NEW JERSEY ONE CALL (1–800–272–1000). NO EXCAVATION WORK SHALL BEGIN UNTIL UNTIL THE UTILITIES ARE MARKED.

11. THE CONTRACTOR SHALL NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER MATERIALLY FROM THOSE REPRESENTED HEREON. SUCH CONDITIONS COULD RENDER THE DESIGNS SHOWN HEREON INAPPROPRIATE OR INEFFECTIVE.

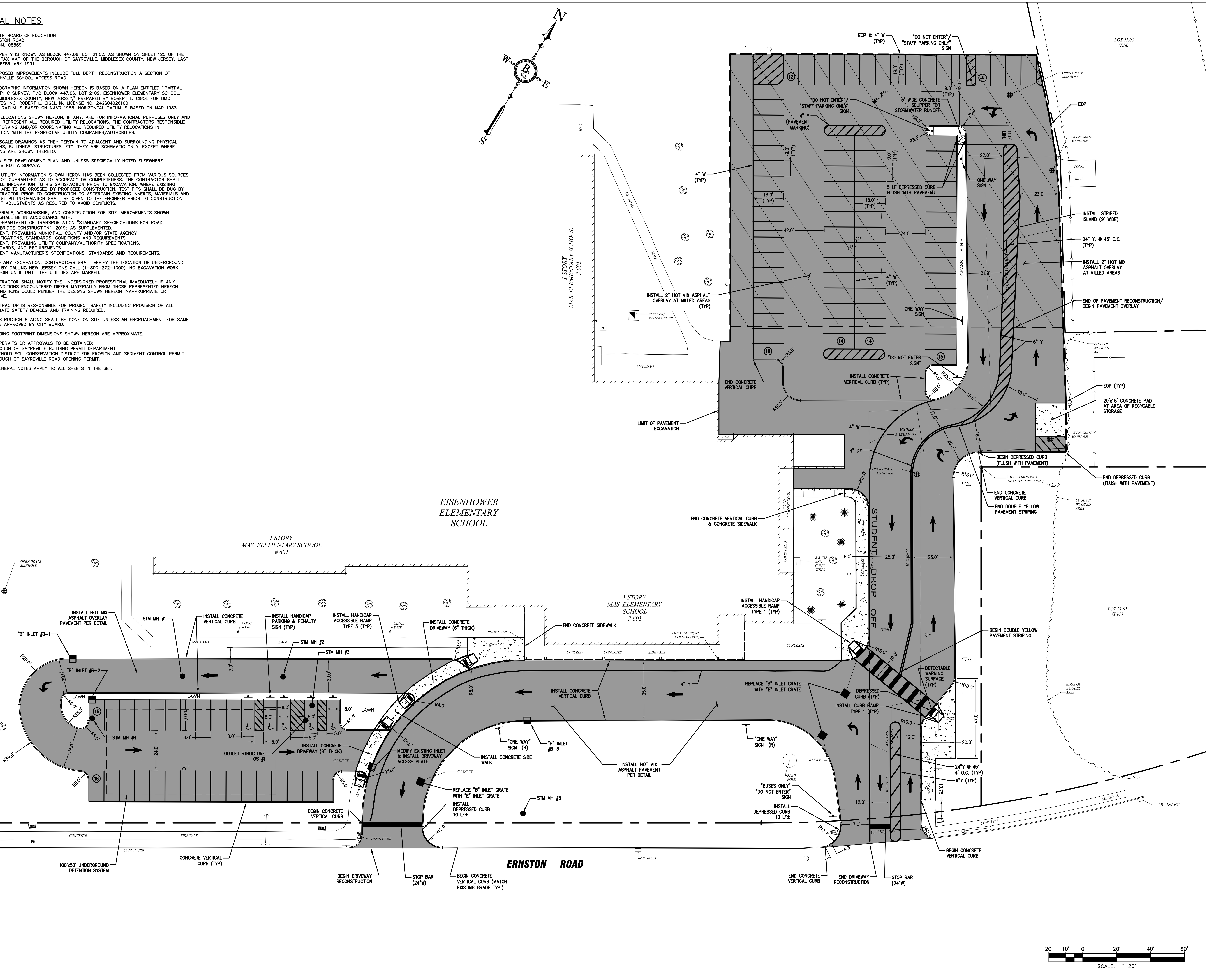
12. THE CONTRACTOR IS RESPONSIBLE FOR PROJECT SAFETY INCLUDING PROVISION OF ALL APPROPRIATE SAFETY DEVICES AND TRAINING REQUIRED.

13. ALL CONSTRUCTION STAGING SHALL BE DONE ON SITE UNLESS AN ENCROACHMENT FOR SAME SHALL BE APPROVED BY CITY BOARD.

14. ALL BUILDING FOOTPRINT DIMENSIONS SHOWN HEREON ARE APPROXIMATE.

15. LIST OF PERMITS OR APPROVALS TO BE OBTAINED:
   (A.) BOROUGH OF SAYREVILLE BUILDING PERMIT DEPARTMENT
   (B.) FREEHOLD SOIL CONSERVATION DISTRICT FOR EROSION AND SEDIMENT CONTROL PERMIT
   (C.) BOROUGH OF SAYREVILLE ROAD OPENING PERMIT.

16. THESE GENERAL NOTES APPLY TO ALL SHEETS IN THE SET.



CODE REVIEW:

CERTIFICATE:

spiezle

SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

SIGNATURE:

THOMAS S. PERRINO	21AI01505400
SCOTT E. DOWNIE	21AI01674400
STEVEN LEONE	21AI01170100
STEVEN G. SIEGEL	21AI01564200
ANGELO ALBERTO	21AI01046700
JOHN F. WRIGHT	21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC.	21AC00063000

SEAL:

CONSULTANTS:

B&G Engineering LLC
State of N.J. Certificate of Authorization: 24GA28168000
30 BERNARD DRIVE
EWING, N.J. 08628
Phone (732) 598-6616
Fax (609) 671-0715

BESRICK G. PLUMMER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 39534

PROJECT:
PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL
601 ERNSTON ROAD, PARLIN, NJ 08859
LOT 2102, BLOCK 447.06
BOROUGH OF SAYREVILLE,
MIDDLESEX COUNTY, NJ
FOR

SAYREVILLE PUBLIC SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW:

REVISIONS:

#	REVISION NAME	DATE

FOR BID:

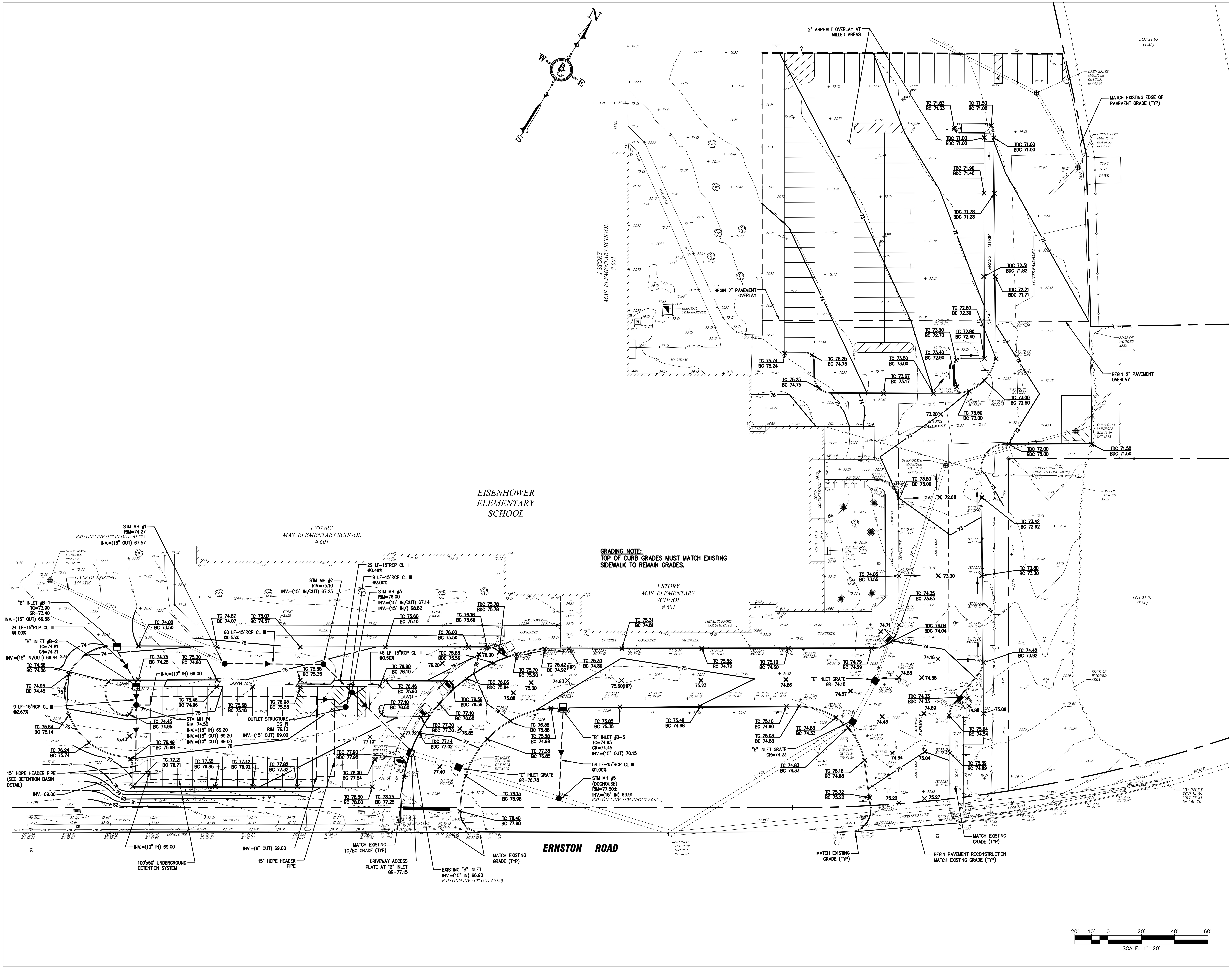
DRAWING TITLE:
DIMENSION & CIRCULATION PLAN

COMMISSION NUMBER:
25K011

B&G PROJECT NO.: 2401A

DRAWING NUMBER:
SW-3

THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"x42"



CODE REVIEW:

CERTIFICATE:

spiezle

SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

SIGNATURE:

THOMAS S. PERRINO	21AI01505400
SCOTT E. DOWNIE	21AI01674400
STEVEN LEONE	21AI01170100
STEVEN G. SIEGEL	21AI01564200
ANGELO ALBERTO	21AI01046700
JOHN F. WRIGHT	21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC.	21AC00063000

SEAL:

CONSULTANTS:

B&G
Engineering LLC
State of N.J. Certificate of Authorization: 24GA28168000
30 BERNARD DRIVE
EWING, N.J. 08628
Phone (732) 598-6616
Fax (609) 671-0715

BESRICK G. PLUMMER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 39534

PROJECT:
PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL
601 ERNSTON ROAD, PARLIN, NJ 08859
LOT 2102, BLOCK 447.06
BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NJ
FOR

SAYREVILLE PUBLIC SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW:

REVISIONS:

#	REVISION NAME	DATE

FOR BID:

DRAWING TITLE:
GRADING AND STORM WATER MANAGEMENT PLAN

COMMISSION NUMBER:
25K011

B&G PROJECT NO.: 2401A

DRAWING NUMBER:
SW-4

THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"x42"

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY–EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.

2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE–CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.

4. N.J.S.A 4:24–39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT–BY–LOT OR SECTION–BY–SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.

5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 ½ TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.

6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.

7. A SUB–BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB–BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1"– 2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.

9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT–OF–WAYS WILL BE REMOVED IMMEDIATELY.

10. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.

11. AT THE TIME THAT 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 IT 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, NON–VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/1,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.

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

14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.
15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.

16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.

17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.

18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

MITIGATION NOTES FOR ACIDIC SOIL

1. LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH ACID PRODUCING SOILS ARE ENCOUNTERED.

2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOILS.

3. STOCKPILES OF HIGH ACID PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.

4. TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOIL MATERIAL TO BE STORED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID PRODUCING SOIL.

5. HIGH ACID PRODUCING SOILS WITH A pH OF 4 OR LESS, OR CONTAINING IRON SULFIDE, (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT A RATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A pH OF 5 OR MORE EXCEPT AS FOLLOWS:

   A. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A pH OF 5 OR MORE.

   B. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES AND OTHERS TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.

6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.

7. NON VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SILT FENCE, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID PRODUCING SOILS FROM, AROUND OR OFF THE SITE.

8. FOLLOWING BURIAL OR REMOVAL OF HIGH ACID PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE, (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING) MONITORING SHOULD CONTINUE FOR A MINIMUM OF 6 MONTHS TO ASSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.

SOIL REMOVAL NOTE

ALL SOIL WASHED, DROPPED, TRACKED OR SPILLED ONTO PAVED SURFACES SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR.

DUST CONTROL NOTE

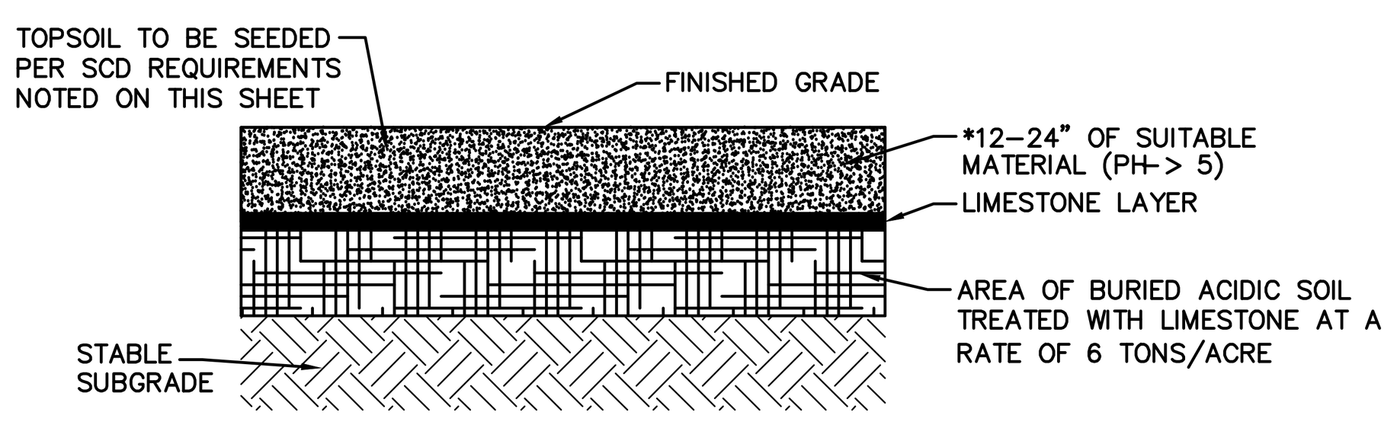
THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL AT DISTURBED AREAS BY SPRINKLING DISTURBED SOIL WITH WATER OR BY USING OTHER APPROVED METHODS OF DUST CONTROL.

STORM DRAIN INLET PROTECTION NOTE

ALL INLETS (EXISTING AND PROPOSED) WITHIN THE LIMITS OF DISTURBANCE MUST BE RETROFITTED WITH STORM DRAIN INLET PROTECTION (ACCEPTABLE BY THE SOIL CONSERVATION DISTRICT) PRIOR TO ANY LAND DISTURBANCE. OTHER INLETS LOCATED IN CLOSE PROXIMITY TO THE PROPOSED DISTURBED AREA MUST ALSO BE PROTECTED FROM SEDIMENTS AS SHOWN ON THIS PLAN.

SEQUENCE OF CONSTRUCTION

1. INSTALL ALL PRECONSTRUCTION SOIL EROSION & SEDIMENT CONTROL MEASURES INCLUDING CONSTRUCTION ENTRANCES, SILT FENCE AND INLET PROTECTIONS (2 DAYS)
2. CLEAR SITE AS SHOWN ON PLANS WITH APPROPRIATE EROSION CONTROL FACILITIES IN PLACE (4 WEEKS).
3. PROVIDE AND INSTALL TEMPORARY STABILIZATION MEASURES AS REQUIRED (DURATION)
4. INSTALL PROPOSED UNDERGROUND DETENTION AND STORM SEWER SYSTEM (2 WEEKS)
5. INSTALL ADDITION INLET PROTECTIONS AT NEW INLETS (1 DAY)
6. SITE GRADING FOR PARKING LOT (2 WEEKS)
7. INSTALL CONCRETE CURB (2 WEEKS)
8. INSTALL CONCRETE SIDEWALK & RAMPS (3 DAYS)
9. INSTALL PAVEMENT BASE COURSES. (2 WEEKS)
10. INSTALL PAVEMENT SURFACE COURSE (1 WEEK)
11. REGRADING & STABILIZATION OF LAWN AREAS. (2 DAYS)
12. REMOVAL OF SOIL EROSION & SEDIMENT CONTROL FACILITIES WHEN PERMANENT EROSION CONTROL MEASURES ARE ACCEPTED BY THE CONSERVATION DISTRICT AND BOROUGH ENGINEER (2 DAYS)

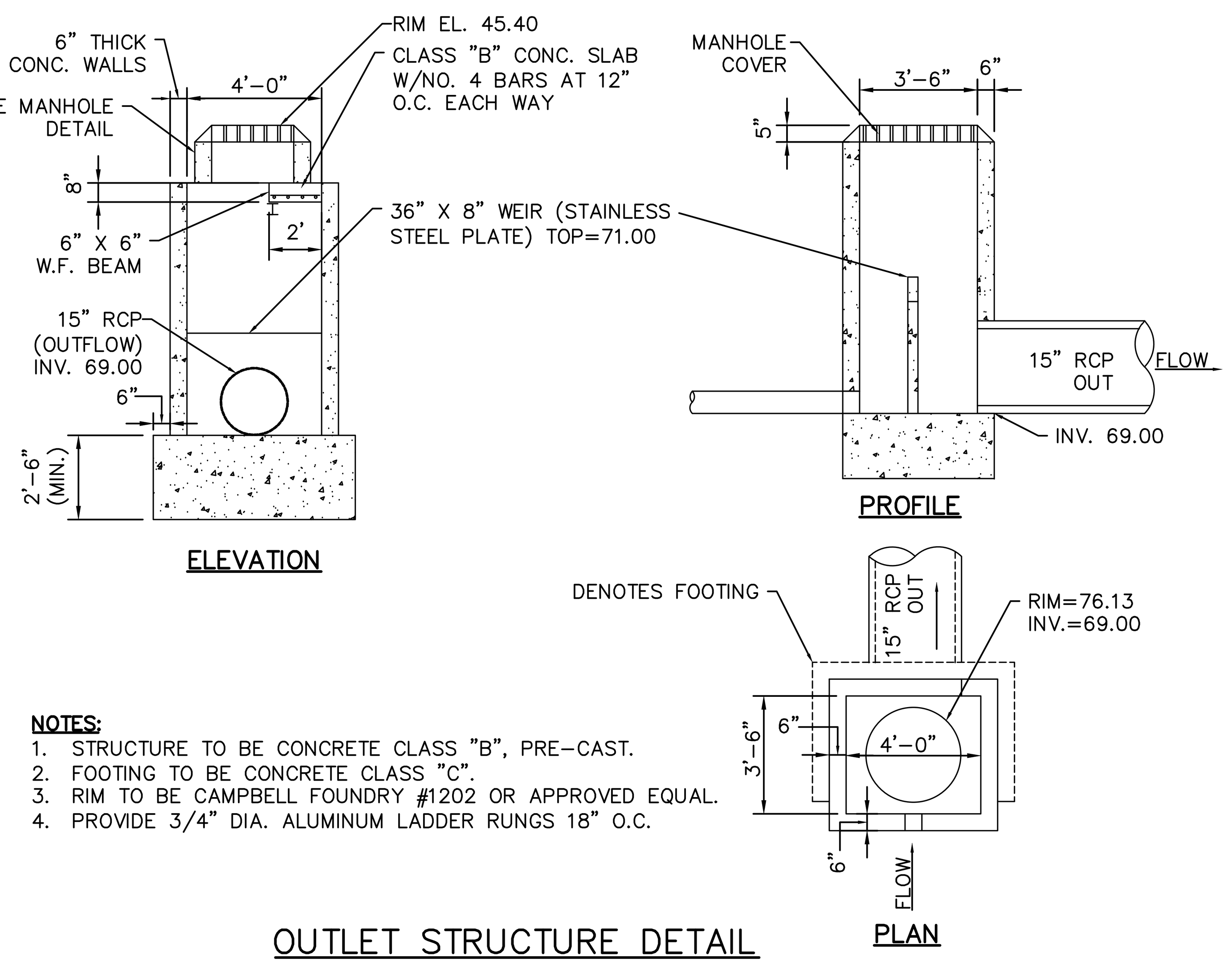


* 24" OF TOPSOIL TO BE INSTALLED IN AREAS DESIGNATED FOR TREE OR SHRUB PLANTING.

1. ACID PRODUCING SOILS ARE DEFINED AS SOILS CONTAINING IRON SULFIDE MINERALS OR SOILS WITH A pH OF 4.0 OR LESS.
2. IRON SULFIDE MINERALS WILL PRODUCE SULFURIC ACID WHEN EXPOSED TO THE AIR AND SURFACE WATERS.
3. SOIL USED TO COVER ACID PRODUCING SOILS SHALL HAVE A pH OF 5.0 OR MORE.
4. SLOPED AREAS AND AREAS WITH TREE AND SHRUB PLANTINGS WILL BE COVERED WITH 2 FEET OF SUITABLE MATERIAL, THE TOP 5 INCHES SHALL BE TOPSOIL.
5. ACID SOIL BURIAL WILL AVOID AREAS OF RESIDENTIAL LOTS.

ACID SOIL MITIGATION DETAIL

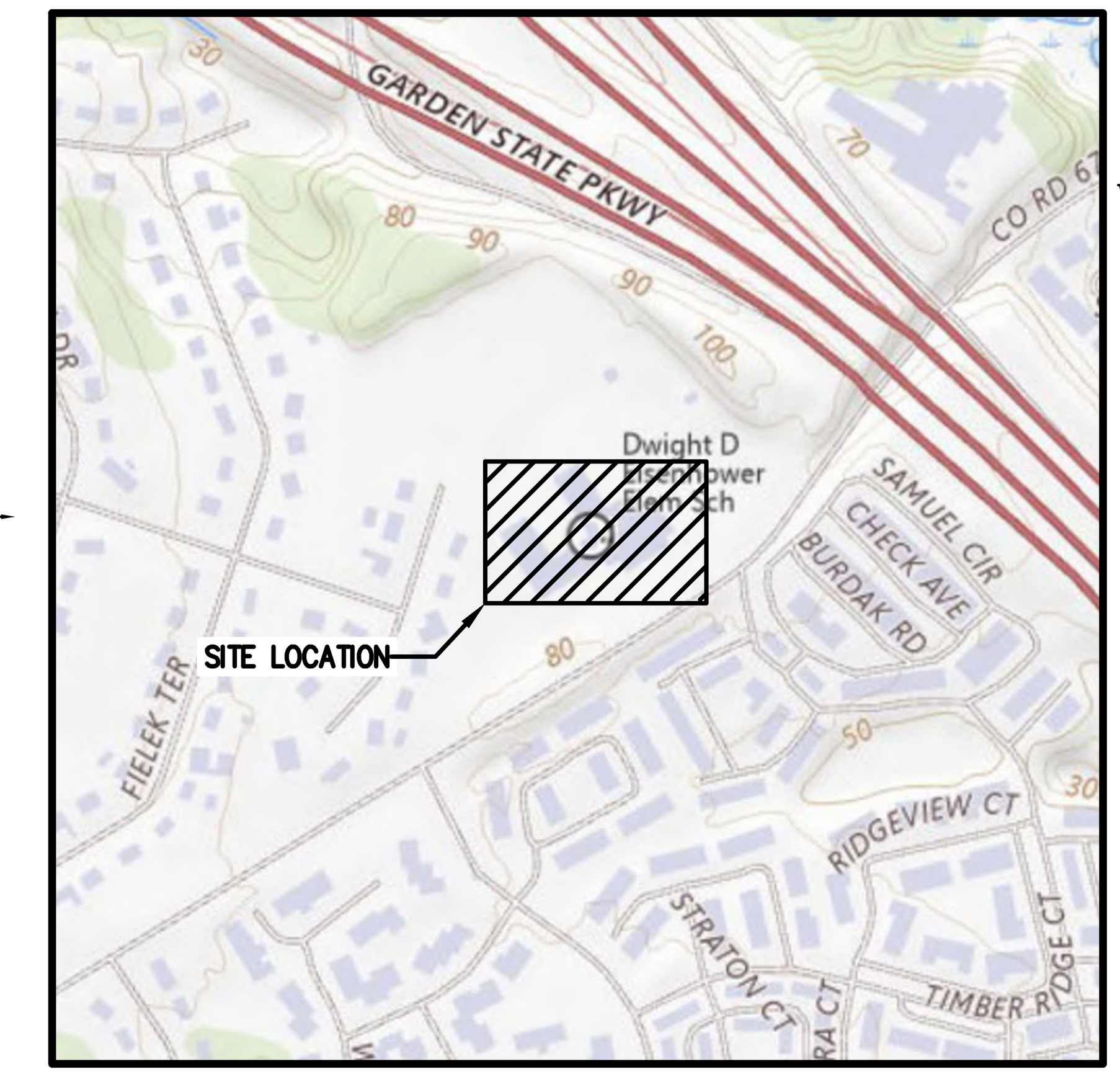
N.T.S.



NOTES:
1. STRUCTURE TO BE CONCRETE CLASS "B", PRE–CAST.
2. FOOTING TO BE CONCRETE CLASS "C".
3. RIM TO BE CAMPBELL FOUNDRY #1202 OR APPROVED EQUAL.
4. PROVIDE 3/4" DIA. ALUMINUM LADDER RUNGS 18" O.C.

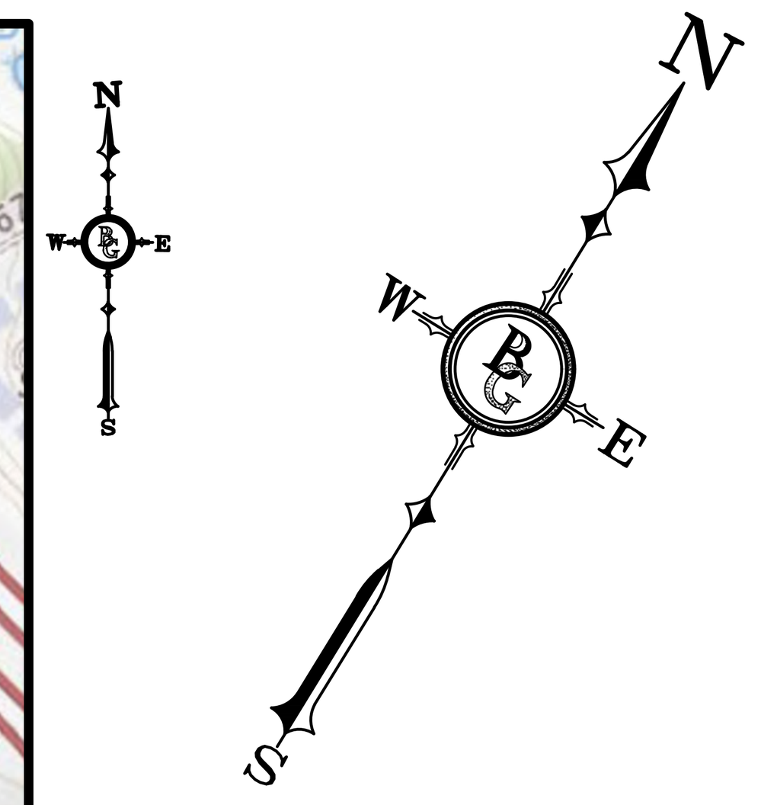
OUTLET STRUCTURE DETAIL

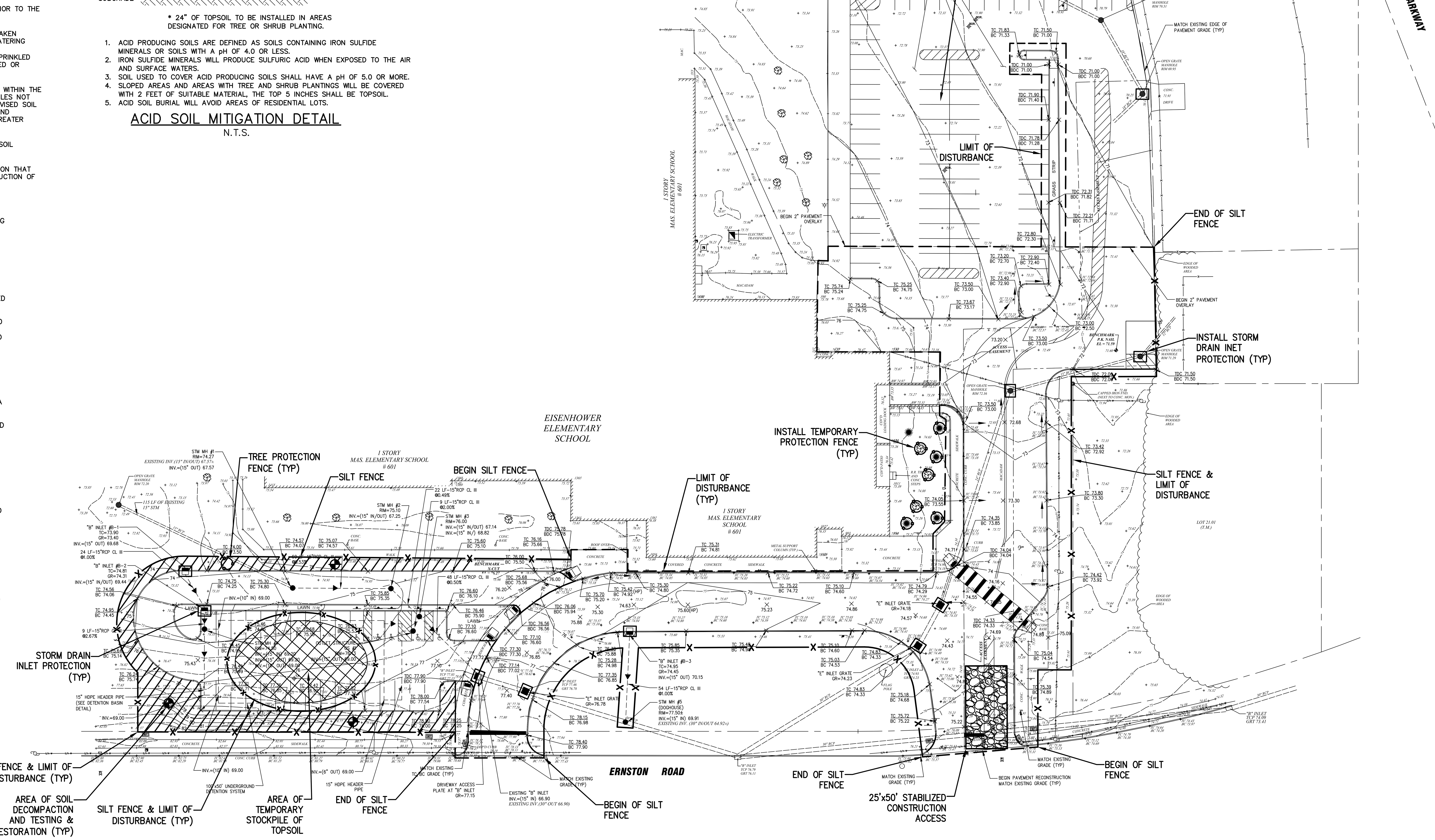
N.T.S.



SITE LOCATION MAP

SCALE: 1"=400'





30' 15' 0 30' 60' 90'

SCALE: 1"=30'

THIS SHEET TO BE USED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY!!

TOTAL AREA OF DISTURBANCE = 74,707 S.F., 1.72 ACRE

CODE REVIEW:

CERTIFICATE:

spiezle

SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

SIGNATURE:

THOMAS S. PERRINO	21AI01505400
SCOTT E. DOWNIE	21AI01674400
STEVEN LEONE	21AI01170100
STEVEN G. SIEGEL	21AI01564200
ANGELO ALBERTO	21AI01046700
JOHN F. WRIGHT	21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC.	21AC00063000

SEAL:

CONSULTANTS:

B&G Engineering LLC
State of N.J. Certificate of Authorization: 24GA28168000
30 BERNARD DRIVE
EWING, N.J. 08628
Phone (732) 598-6616
Fax (609) 671-0715

BESRICK G. PLUMMER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 39534

PROJECT:
PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL
601 ERNSTON ROAD, PARLIN, NJ 08859
LOT 2102, BLOCK 447.06
BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NJ
FOR

SAYREVILLE PUBLIC SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW:

REVISIONS:

#	REVISION NAME	DATE

FOR BID:

DRAWING TITLE:
SOIL EROSION AND SEDIMENT CONTROL PLAN

COMMISSION NUMBER:
25K011

B&G PROJECT NO.: 2401A

DRAWING NUMBER:
SW-5

THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"x42"

TEMPORARY SEEDING SPECIFICATIONS

1. 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.

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 611 TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.)

2. SEEDBED PREPARATION *

A. APPLY GROUND LIMESTONE AND FERTILIZ.ER 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"/O WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE.

* SOIL TESTING SHOULD BE DONE TO DETERMINE AMOUNT OF LIMESTONE REQUIRED AND APPLICATION RATE.

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 HIGH ACID PRODUCING SOILS, PG. 1–1.

3. SEEDING

A. SELECT SEED FROM.RECOMMENDATIONS IN TABLE 7–2.

LOCATION	ACCEPTABLE SEED MIXES			OPTIMAL SEEDING DATES
LAWN	SPRING OATS	86 LBS/ACRE	2.0 LBS/1,000SF	3/01 TO 5/15 AND 8/15 TO 10/01
	ANNUAL RYEGRASS	100 LBS/ACRE	1.0 LBS/1,000SF	3/15 TO 6/01 AND 8/01 TO 9/15
	PERENNIAL RYEGRASS	100 LBS/ACRE	1.0 LBS/1,000SF	3/01 TO 5/15 AND 8/15 TO 10/01

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 1/2 INCH. BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

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 FERTILIZ.ER 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 IV MULCHING) HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZ.ER 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 OBSTRUCTED WITH ROCKS, STUMPS, ETC.

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 ON SITE WILL BE MAXIMIZED.

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 REQUIREMENT.

A. STRAW OR HAY. UNNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, APPLIED 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 GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 95% 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.

ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR 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 8 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 CRISS–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 ADHESIVE AGENT IS REQUIRED.

4. LIQUID MULCH–BINDERS. –MAY BE USED TO ANCHOR HAY OR STRAW MULCH.

a. 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 OF1HE 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 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 BYIHE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.

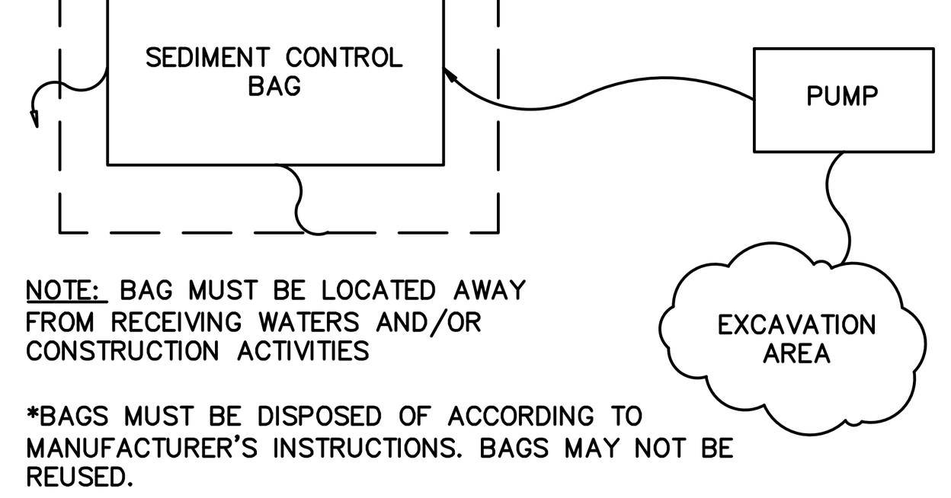
(2) SYNTHETIC BINDERS – HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES RECOMMENDED BY 1HE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

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 1,500PONDS PER ACRE (OR AS RECOMMENDED BY THE PROJECT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. THIS 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 BEEN 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.



NOTE: BAG MUST BE LOCATED AWAY FROM RECEIVING WATERS AND/OR CONSTRUCTION ACTIVITIES

*BAGS MUST BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS. BAGS MAY NOT BE REUSED.

DEWATERING DETAIL
N.T.S.

STABILIZED CONSTRUCTION ACCESS NOTES

1. WHERE STABILIZED CONSTRUCTION EXIT TRAVERSES BETWEEN TWO BUILDINGS, IT SHALL BE STONED THE ENTIRE LENGTH OF OF THE RIGHT–OF–WAY. MOUNTABLE STONE BERMS PLACED ACROSS THE WIDTH OF THE EXIT MAY ALSO BE REQUIRED AT THE TRANSITION POINT BETWEEN PAVED AND NON–PAVED AREAS TO TRAP SEDIMENTS WHICH ARE CARRIED BY STORMWATER FLOWING ALONG THE CURBLINE.

2. INDIVIDUAL LOT ENTRANCE AND EGRESS. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOT INGRESS/EGRESS POINTS MAY REQUIRE A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF NO. 3 STONE (1" TO 2") TO PREVENT OR MINIMIZE TRACKING OF SEDIMENTS. WIDTH OF THE STONE INGRESS/EGRESS SHALL BE EQUAL TO LOT ENTRANCE WIDTH AND SHALL BE A MINIMUM OF TEN FEET IN LENGTH.

3. TIRE WASHING. IF SPACE IS LIMITED, VEHICLE TIRES MAY BE WASHED WITH CLEAN WATER BEFORE ENTERING A PAVED AREA. A WASH STATION MUST BE LOCATED SUCH THAT WASH WATER WILL NOT FLOW ONTO PAVED ROADWAYS OR INTO UNPROTECTED STORM DRAINAGE SYSTEMS.

4. WHEN CONSTRUCTION ACCESS EXISTS ONTO MAJOR ROADWAY, A PAVED TRANSITION AREA MAY BE INSTALLED BETWEEN THE MAJOR ROADWAY AND THE STONED ENTRANCE TO PREVENT LOOSE STONES FROM BEING TRANSPORTED OUT ONTO THE ROADWAY BY HEAVY EQUIPMENT ENTERING OR LEAVING THE SITE.

5. THE ENTRANCE SHALL BE MAINTAINED IN A POSITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO ROADWAYS (PUBLIC OR PRIVATE) OR OTHER IMPERVIOUS SURFACES MUST BE REMOVED IMMEDIATELY.

6. WHERE ACCUMULATION OF DUST/SEDIMENT IS INADEQUATELY CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER WILL BE REQUIRED TO CLEAN PAVED OR IMPERVIOUS SURFACES. ALL OTHER ACCESS POINTS WHICH ARE NOT STABILIZED SHALL BE BLOCKED OFF.

STANDARDS FOR TOPSOILING
METHODS AND MATERIALS

1. MATERIALS

A. TOPSOIL SHOULD BE FRIABLE1, LOAMY2, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMHOS PER CENTIMETER. MORE THAN 0.5 MILLIMHOS MAY DESICCATE SEEDLINGS AND ADVERSELY IMPACT GROWTH). IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.

B. TOPSOIL SUBSTITUTE IS A SOIL MATERIAL WHICH MAY HAVE BEEN AMENDED WITH SAND, SILT, CLAY, ORGANIC MATTER, FERTILIZER OR LIME AND HAS THE APPEARANCE OF TOPSOIL. TOPSOIL SUBSTITUTES MAY BE UTILIZED ON SITES WITH INSUFFICIENT TOPSOIL FOR ESTABLISHING PERMANENT VEGETATION. ALL TOPSOIL SUBSTITUTE MATERIALS SHALL MEET THE REQUIREMENTS OF TOPSOIL NOTED ABOVE. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL.

2. STRIPPING AND STOCKPILING

A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.

B. STRIPPING SHALL BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.

C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL PH TO APPROXIMATELY 6.5.

D. A 4–6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.

E. STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF–SITE ENVIRONMENTAL DAMAGE.

F. STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH STANDARDS PREVIOUSLY DESCRIBED HEREIN; SEE STANDARDS FOR PERMANENT (PG. 4–1) OR TEMPORARY (PG.7–1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.

3. SITE PREPARATION

A. GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD SO AS TO MINIMIZE THE DURATION AND AREA OF EXPOSURE OF DISTURBED SOIL TO EROSION. IMMEDIATELY PROCEED TO ESTABLISH VEGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED SEED MIXTURE. TIME IS OF THE ESSENCE

B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. SEE THE STANDARD FOR LAND GRADING, PG. 19–1.

C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL TO A PH OF APPROXIMATELY 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.

D. PRIOR TO TOPSOILING, THE SUBSOIL SHALL BE IN COMPLIANCE WITH THE STANDARD FOR LAND GRADING, PG. 19–1.

E. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

4. APPLYING TOPSOIL

A. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY (SEE GLOSSARY).

B. A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES, MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE SUCH AS ON GOLF COURSES, SPORTS FIELDS, LANDFILL CAPPING, ETC.. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE, IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL (PG. 1–1).

C. PURSUANT TO THE REQUIREMENTS IN SECTION 7 OF THE STANDARD FOR PERMANENT VEGETATIVE STABILIZATION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT PERMANENT VEGETATIVE COVER BECOMES ESTABLISHED ON AT LEAST 80% OF THE SOILS TO BE STABILIZED WITH VEGETATION. FAILURE TO ACHIEVE THE MINIMUM COVERAGE MAY REQUIRE ADDITIONAL WORK TO BE PERFORMED BY THE CONTRACTOR TO INCLUDE SOME OR ALL OF THE FOLLOWING: SUPPLEMENTAL SEEDING, RE–APPLICATION OF LIME AND FERTILIZERS, AND/OR THE ADDITION OF ORGANIC MATTER (I.E. COMPOST) AS A TOP DRESSING. SUCH ADDITIONAL MEASURES SHALL BE BASED ON SOIL TESTS SUCH AS THOSE OFFERED BY RUTGERS COOPERATIVE EXTENSION SERVICE OR OTHER APPROVED LABORATORY FACILITIES QUALIFIED TO TEST SOIL SAMPLES FOR AGRONOMIC PROPERTIES.

STANDARDS FOR STABILIZATION WITH MULCH ONLY
METHODS AND MATERIALS

1. 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

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42. 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.

2. PROTECTIVE MATERIALS

A. UNROTTED SMALL–GRAIN STRAW, OR SALT HAY 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.

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 OF2 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 OF9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C–33) IS RECOMMENDED.

3. MULCH ANCHORING– SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.

A. PEG AND TWINE– DRIVE 8 TO I 0 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 SOIFSURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS–CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

B. MULCH NETTINGS– STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY VAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.

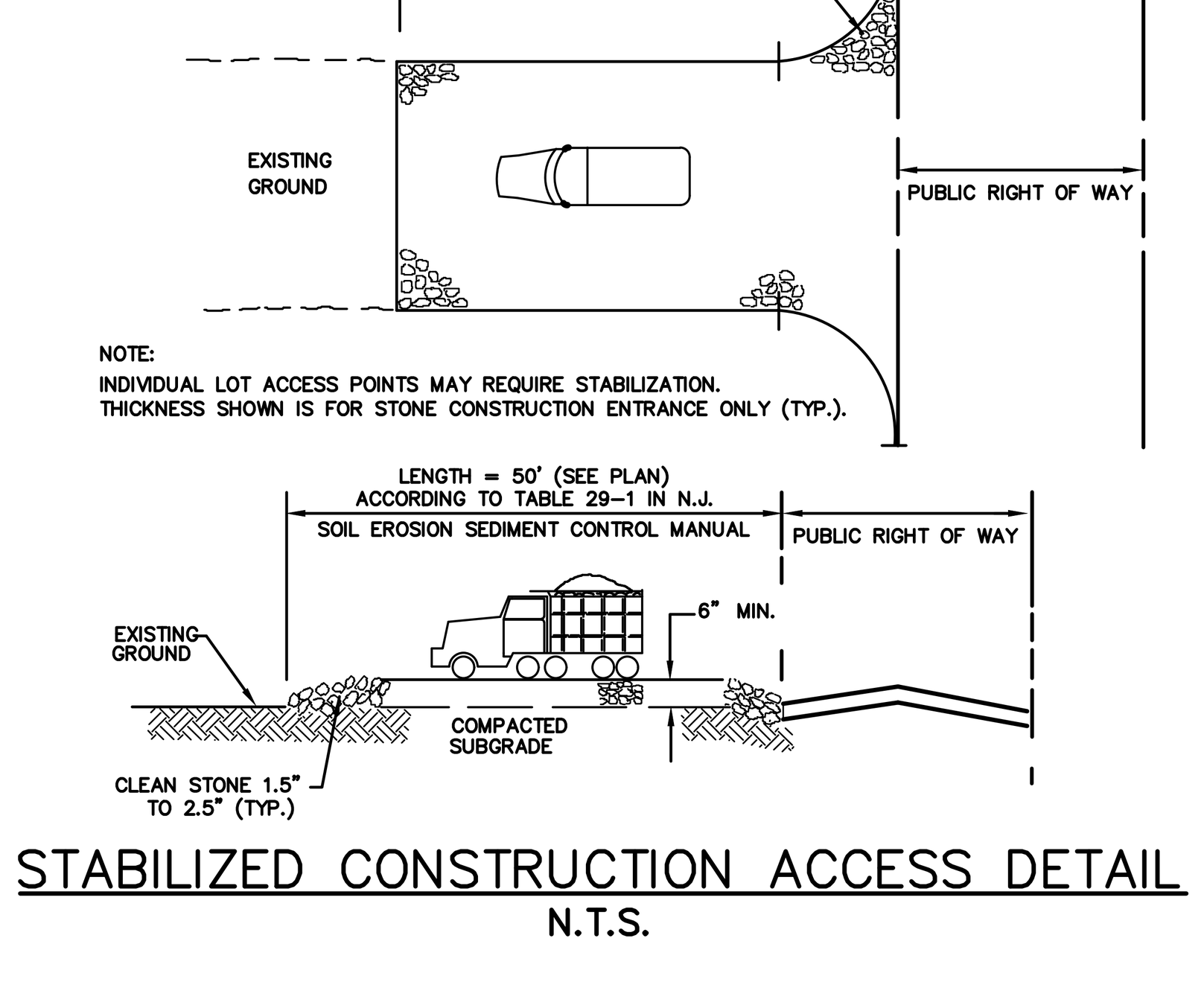
C. CRIMPER MULCH ANCHORING COULTER TOOL –A TRACTOR–DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.

D. LIQUID MULCH–BINDERS
1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.

2. USE ONE OF THE FOLLOWING:

a. 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 MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC 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 DILUTED 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.



STABILIZED CONSTRUCTION ACCESS DETAIL
N.T.S.

PERMANENT SEEDING SPECIFICATIONS

1. 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 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 WATERWAYS.

2. 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/). FERTILIZ.ER 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 TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING–TOOTH 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. 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 S OR MORE BEFORE INITIATING SEEDBED REPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID–PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.

3. SEEDING

A. SELECT A MIXTURE FROM TABLE 4–2 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 OLD UNLESS RETESTED.

LOCATION		ACCEPTABLE SEED MIXES			OPTIMAL SEEDING DATES	ACCEPTABLE SEEDING DATES
	MIX # 15 –	HARD FESCUE	130 LBS/ACRE	3.0 LBS/1,000SF	8/15 TO 10/15	3/1 TO 4/30 5/1 TO 8/14
		CHEWING FESCUE	45 LBS/ACRE	1.0 LBS/1,000SF		
		STRONG CREEPING RED FESCUE	45 LBS/ACRE	1.0 LBS/1,000SF		
LAWN		PERENNIAL RYEGRASS	10 LBS/ACRE	0.25 LBS/1,000SF		
	MIX # 16 –	ROUGH BLUEGRASS	90 LBS/ACRE	2.0 LBS/1,000SF	8/15 TO 10/15	3/1 TO 4/30 5/1 TO 8/14
		STRONG CREEPING RED FESCUE	130 LBS/ACRE	3.0 LBS/1,000SF		

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 MAY 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 F AND ABOVE. SEE TABLE 4–2 MIXTURES 1TO 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°F. MANY GRASSES BECOME ACTIVE AT 65°F. SEE TABLE 4–2, 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 SOIL.

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 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 BELOW). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.

4. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL PROTECT 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 REQUIREMENT

A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, TO BE APPLIED 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 GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION – SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 85% OF THE SOIL SURFACE IS 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.

ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

I. PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STABS MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS–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 COULTER 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 ADHESIVE AGENT IS REQUIRED.

4. LIQUID MULCH–BINDERS – MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH.

a. 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:

(I)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 OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. 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 USE IN THIS STATE.

(2) SYNTHETIC BINDERS – HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES 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.

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 1,500POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. 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, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S 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 BEEN 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.

5. IRRIGATION (WHERE FEASIBLE)

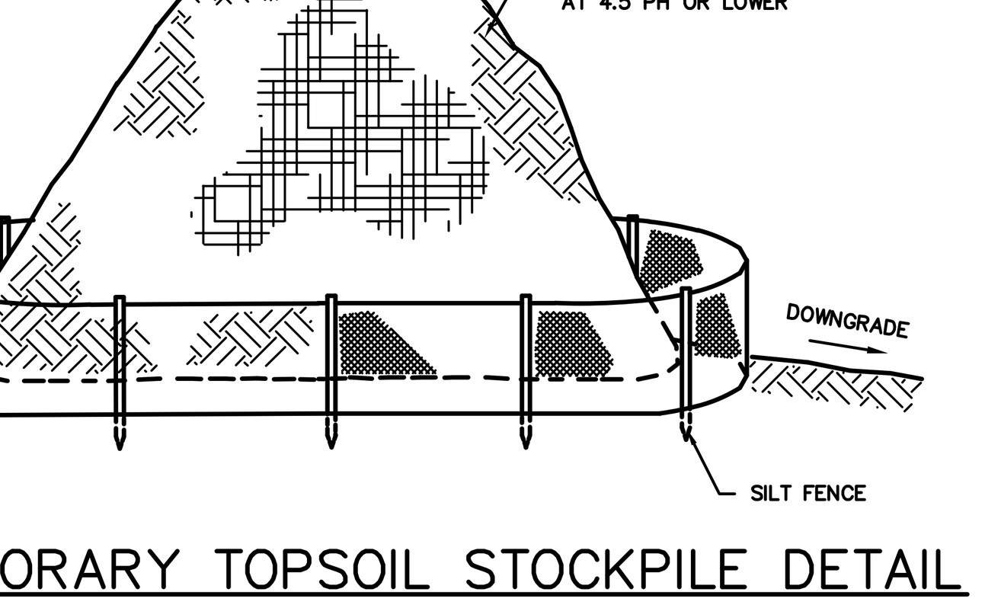
IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF 114 INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

6. TOPDRESSING

SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED IN SECTION 2A – SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW–UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10–10–10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

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 REQUESTING 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. NOTE THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.



TEMPORARY TOPSOIL STOCKPILE DETAIL
N.T.S.

SOIL DE–COMPACTION AND TESTING REQUIREMENTS

SOIL COMPACTION TESTING REQUIREMENTS

1. SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

2. AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.

3. COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS, AND ATTACHED TO THE COMPACTION REMEDIATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.

4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

COMPACTION TESTING METHODS

A. PROBING WIRE TEST (SEE DETAIL)
B. HAND–HELD PENETROMETER TEST (SEE DETAIL)
C. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED
D. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

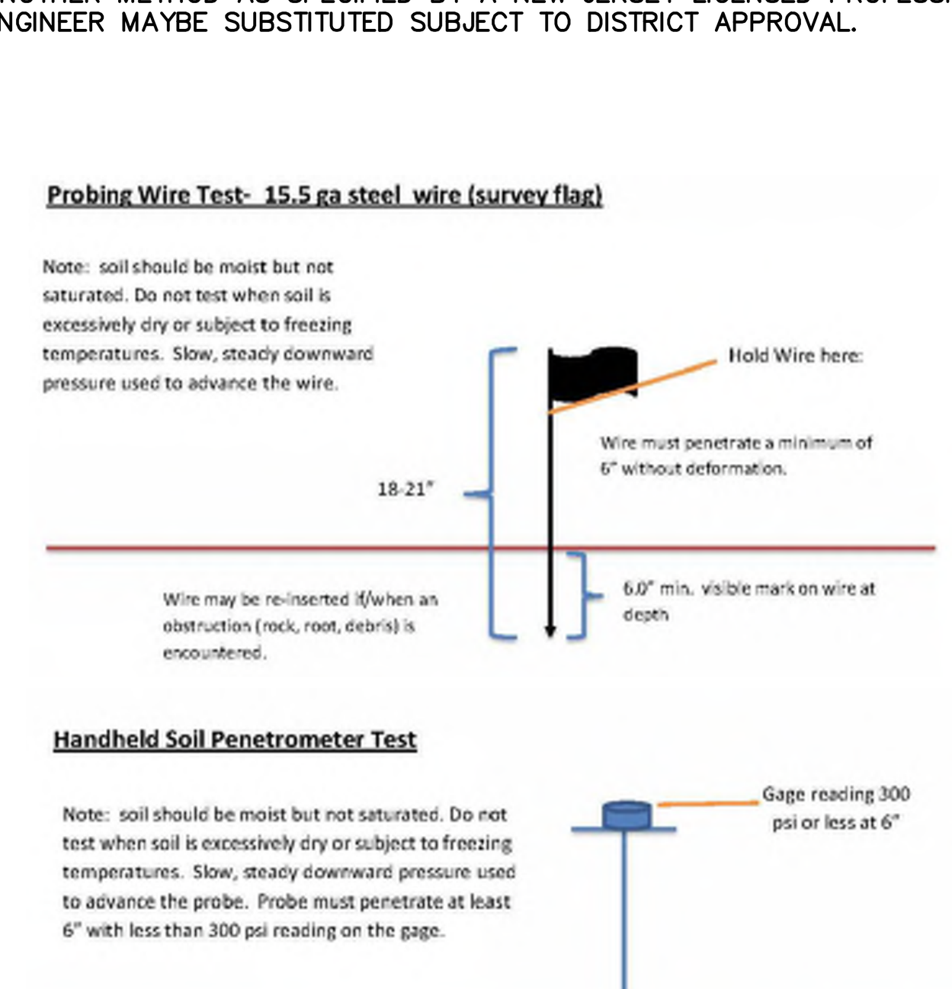
NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

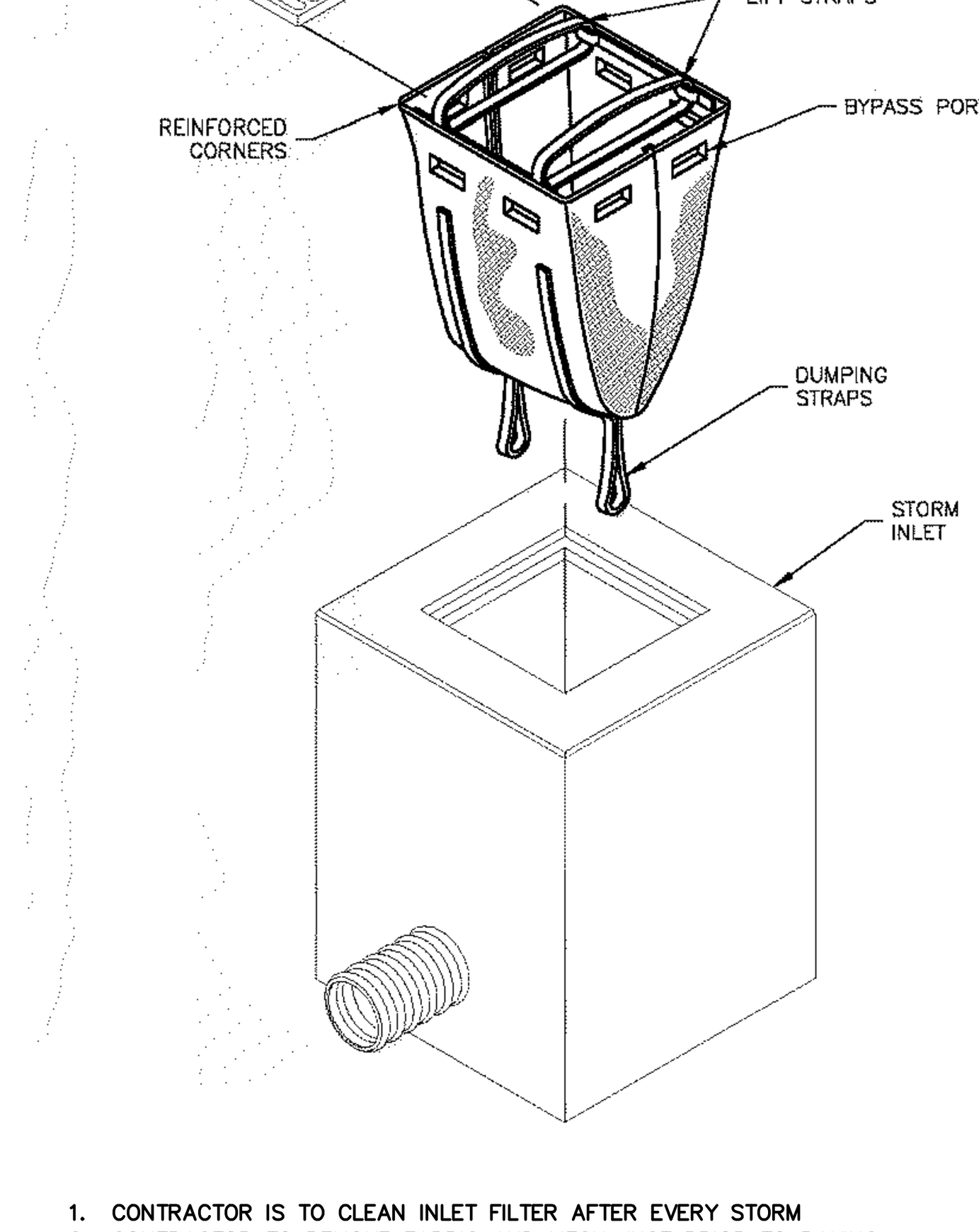
PROCEDURES FOR SOIL COMPACTION MITIGATION

PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

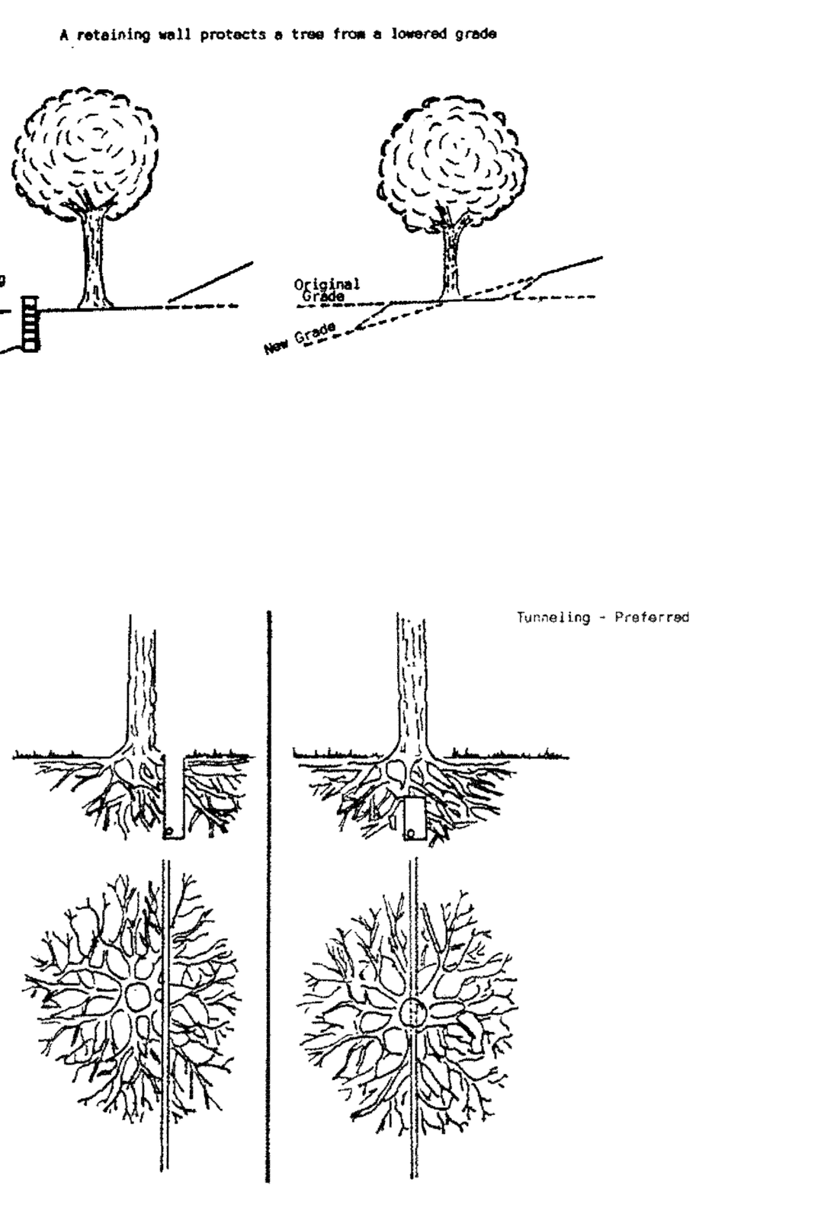


SIMPLIFIED TESTING METHODS DETAIL

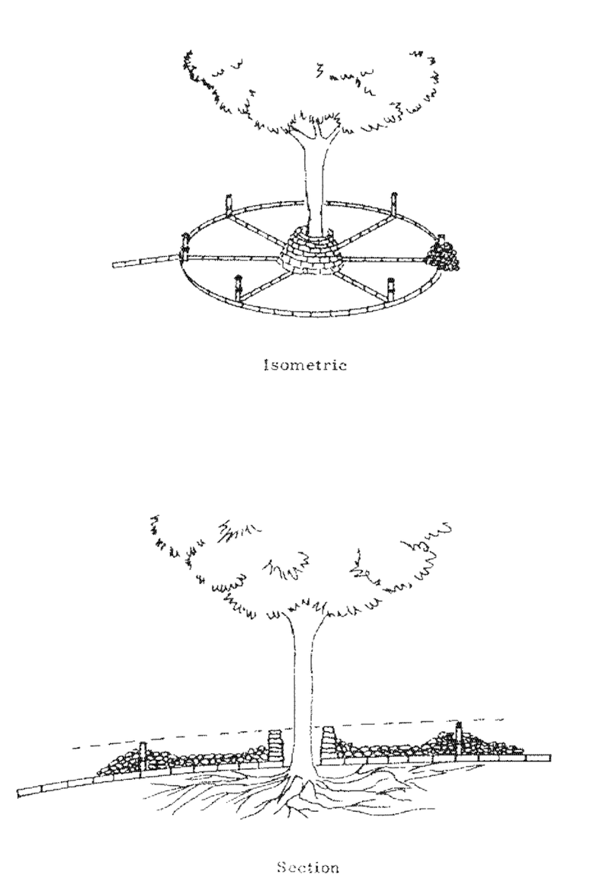


1. CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM
2. CONTRACTOR TO REMOVE FABRIC AND MESH JUST PRIOR TO PAVING
3. REMOVE INLET PROTECTION WHEN THE CONTRIBUTING DRAINAGE AREAS

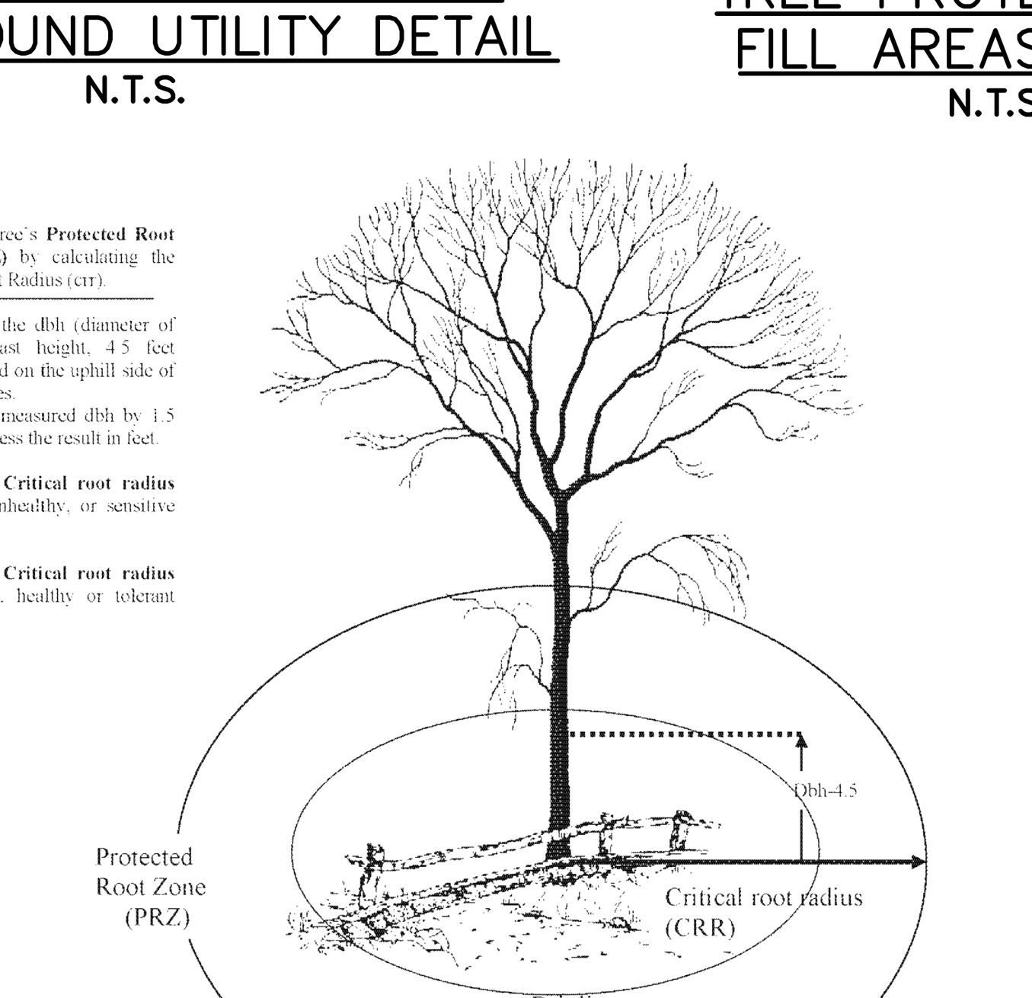
INLET FILTER DETAIL
N.T.S.



TREE PROTECTION DURING UNDERGROUND UTILITY DETAIL
N.T.S.



TREE PROTECTION IN FILL AREAS DETAIL
N.T.S.

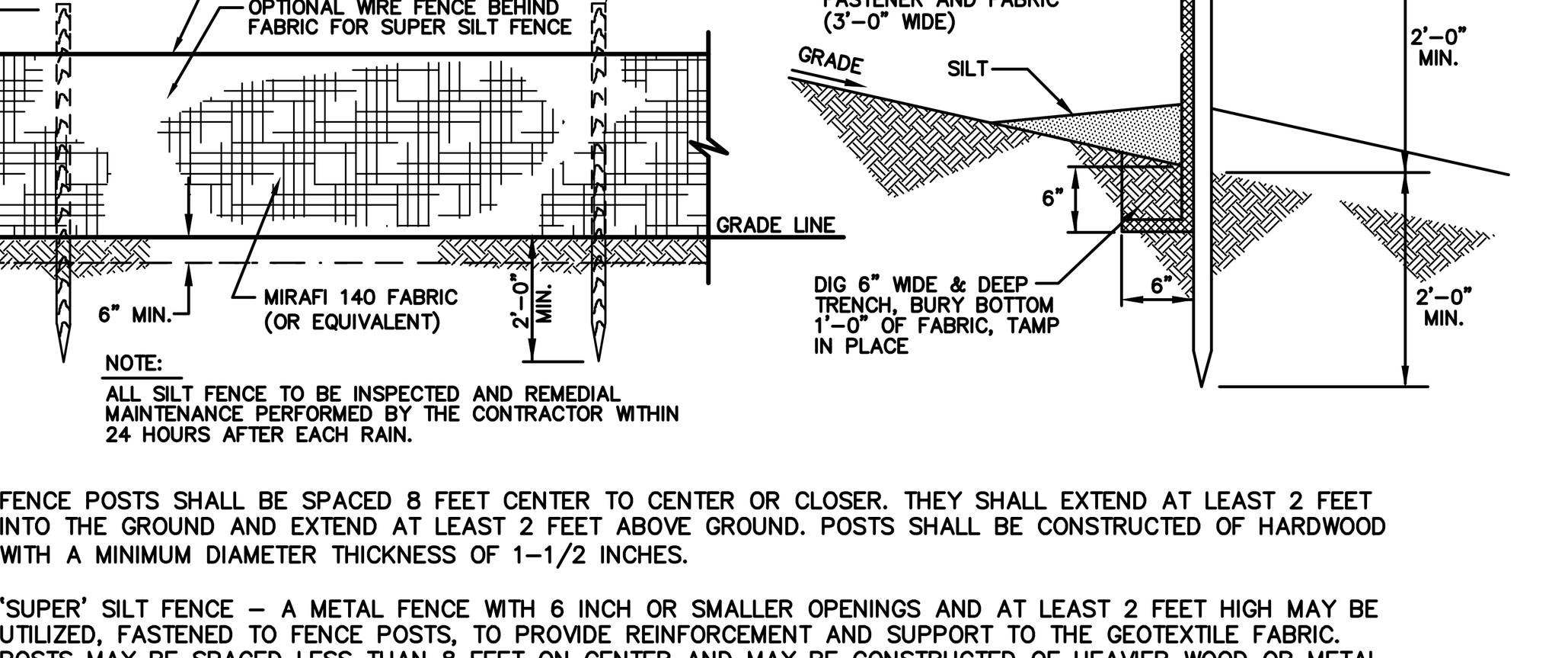


ROOT PROTECTION DURING CONSTRUCTION GUIDE DETAIL
N.T.S.

NOTES:

1. PROTECTIVE FENCING IS TO BE ERECTED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION AS DIRECTED BY THE LANDSCAPE ARCHITECT, SOIL CONSERVATION DISTRICT AND/OR MUNICIPAL ENGINEER.
2. NO CONSTRUCTION ACTIVITY IS PERMITTED WITHIN THE PROTECTIVE FENCING.
3. AS CONSTRUCTION NEARS COMPLETION THE FENCING WILL BE REMOVED AS DIRECTED.
4. AT THE COMPLETION OF CONSTRUCTION ALL TREES WILL BE PRUNED AS NECESSARY TO CORRECT ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITY.
5. GENERAL MECHANICAL DAMAGE – SEE DETAIL ABOVE FOR CORRECT PLACEMENT OF TREE PROTECTION.
6. BOX TREES WITHIN 25 FEET OF A BUILDING SITE TO PREVENT MECHANICAL INJURY. FENCING OR OTHER BARRIER SHOULD BE INSTALLED AT THE DRIP LINE OF THE TREE BRANCHES.
7. BOARDS WILL NOT BE NAILED TO TREES DURING BUILDING OPERATIONS.
8. FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA INSIDE THE DRIP LINE OF THE TREE BRANCHES.
9. DAMAGED TRUNKS OR EXPOSED ROOTS SHOULD HAVE DAMAGED BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED. EXPOSED ROOTS SHOULD BE COVERED WITH TOPSOIL IMMEDIATELY AFTER EXCAVATION IS COMPLETE. ROOTS SHALL BE PRUNED TO GIVE A CLEAN, SHARP SURFACE AMENABLE TO HEALING. ROOTS EXPOSED DURING HOT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR CERTIFIED TREE EXPERT.
10. TREE LIMB REMOVAL WHERE NECESSARY, WILL BE DONE AS NATURAL TARGET PRUNING TO REMOVE THE DESIRED BRANCH COLLAR. THERE SHOULD BE NO FLUSH CUTS. FLUSH CUTS DESTROY A MAJOR DEFENSE SYSTEM OF THE TREE. NO TREE PAINT SHALL BE APPLIED. ALL CUTS SHALL BE MADE AT THE OUTSIDE EDGE OF THE BRANCH COLLAR. CUTS MADE TOO FAR BEYOND THE BRANCH COLLAR MAY LEAD TO EXCESS SPROUTING, CRACKS AND ROT. REMOVAL OF A "V" CROTCH SHOULD BE CONSIDERED FOR FREE STANDING SPECIMEN TREES TO AVOID FUTURE SPLITTING DAMAGE.

TEMPORARY TREE PROTECTION DETAILS
N.T.S.



1. FENCE POSTS SHALL BE SPACED 8 FEET CENTER TO CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM DIAMETER THICKNESS OF 1–1/2 INCHES.

2. 'SUPER' SILT FENCE – A METAL FENCE WITH 6 INCH OR SMALLER OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC. POSTS MAY BE SPACED LESS THAN 8 FEET ON CENTER AND MAY BE CONSTRUCTED OF HEAVIER WOOD OR METAL AS NEEDED TO WITHSTAND HEAVIER SEDIMENT LOADING. THIS PRACTICE IS APPROPRIATE WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED. 'SUPER' SILT FENCE IS NOT TO BE USED IN PLACE OF PROPERLY DESIGNED DIVERSIONS WHICH MAY BE NEEDED TO CONTROL SURFACE RUNOFF RATES AND VELOCITIES.

3. A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS, ETC.) PLACED BETWEEN THE FASTENER AND GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

SILT FENCE DETAIL
N.T.S.

SILT FENCE MAINTENANCE NOTES

1. SEDIMENT SHALL BE REMOVED FROM UPSTREAM FACE OF THE BARRIER WHEN IT HAS REACHED A DEPTH OF ½ THE BARRIER HEIGHT.
2. REPAIR OR REPLACE BARRIER (FABRIC, POST, BALES, ETC.) WHEN DAMAGED
3. BARRIERS SHALL BE INSPECTED DAILY FOR SIGNS OF DETERIORATION AND SEDIMENT REMOVAL.

CODE REVIEW:

CERTIFICATE:

spiezle

SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

SIGNATURE:

THOMAS S. PERRINO	21AI01505400
SCOTT E. DOWNIE	21AI01674400
STEVEN LEONE	21AI01170100
STEVEN G. SIEGEL	21AI01564200
ANGELO ALBERTO	21AI01046700
JOHN F. WRIGHT	21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC.	21AC00063000

SEAL:

CONSULTANTS:
B&G Engineering LLC
State of N.J. Certificate of Authorization: 24GA28168000
30 BERNARD DRIVE
EWING, N.J. 08628
Phone (732) 598–6616
Fax (609) 671–0715

BESRICK G. PLUMMER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 39534

PROJECT:
PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL
601 ERNSTON ROAD, PARLIN, NJ 08859
LOT 2102, BLOCK 447.06
BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NJ
FOR

SAYREVILLE PUBLIC SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW:

REVISIONS:

#	REVISION NAME	DATE

FOR BID:

DRAWING TITLE:
SOIL EROSION AND SEDIMENT CONTROL DETAILS

COMMISSION NUMBER:
25K011

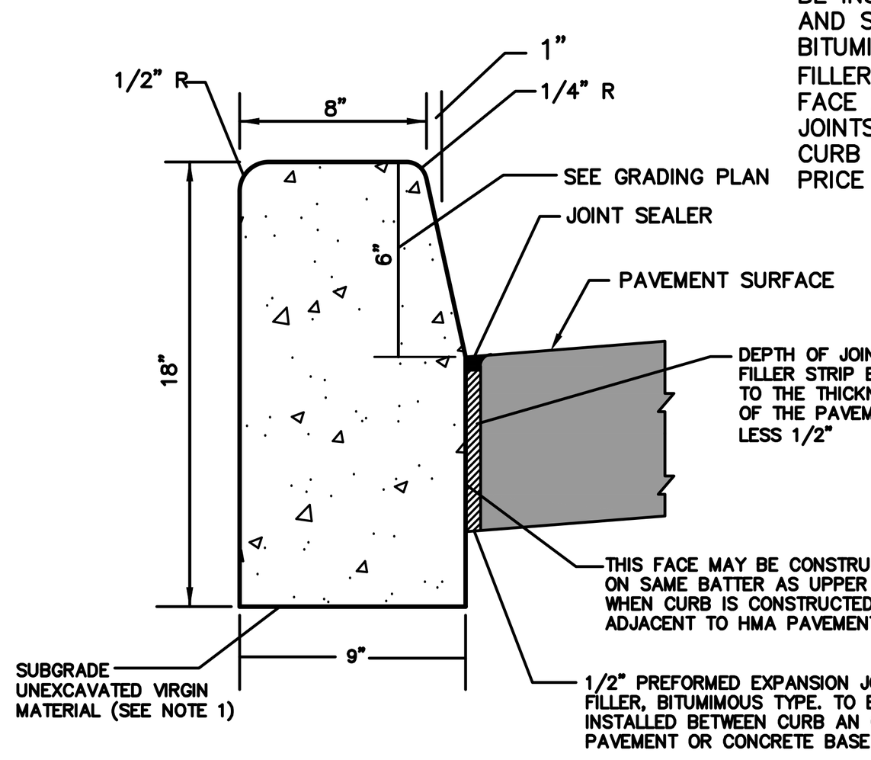
B&G PROJECT NO.: 2401A

DRAWING NUMBER:
SW-6

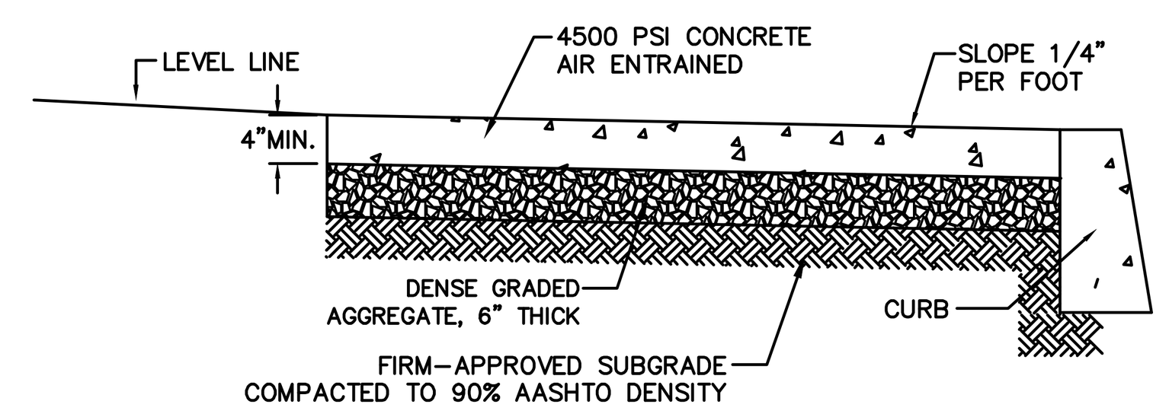
THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"x42"

NOTES:

1. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20' APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB. EXPANSION JOINTS THRU AND ADJACEMENT TO THE CURB SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CURB.

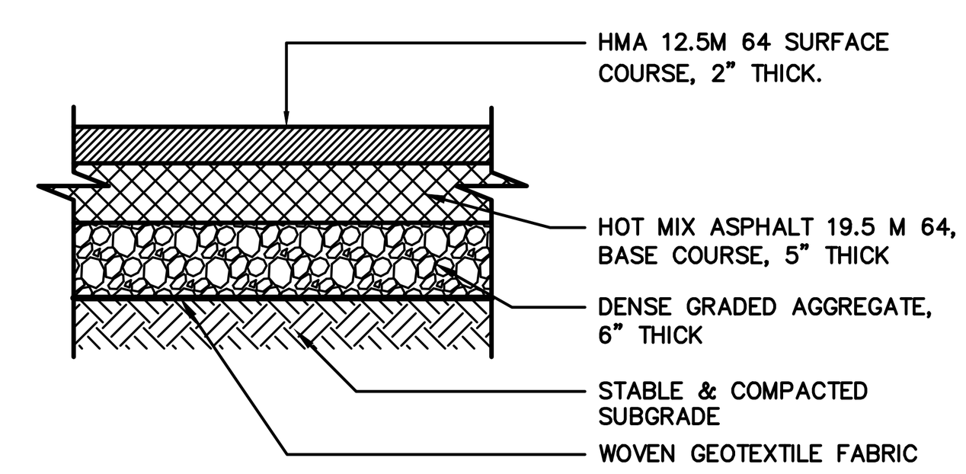


CONCRETE VERTICAL CURB DETAIL
N.T.S.

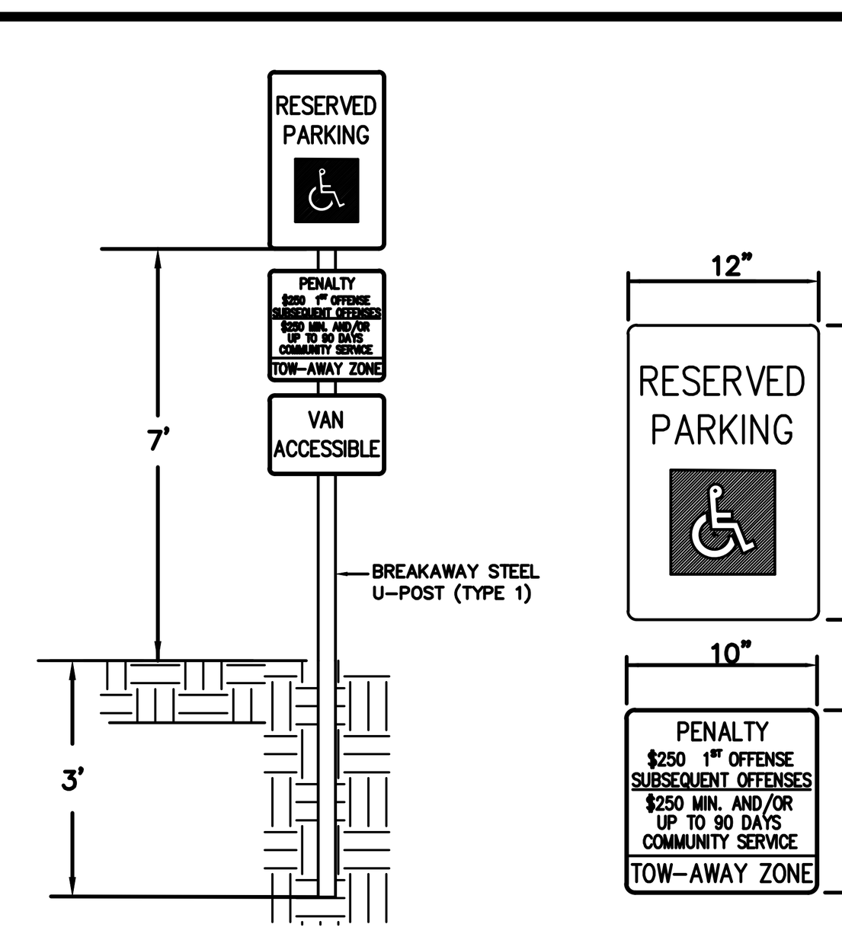


THE FORMS AND DIVIDERS SHALL BE OF STEEL OR WOOD AND OF SUFFICIENT STRENGTH TO RESIST SPRINGING OUT OF SHAPE: AS PER SPECIFICATIONS. WALK SHALL BE OF MONOLITHIC CONSTRUCTION FOUR (4) INCHES THICK. TRANSVERSE SURFACE GROOVES MUST BE PROVIDED FOR AT RIGHT ANGLES TO THE SIDEWALK AND AT INTERVALS EQUAL TO WIDTH OF SIDEWALK. AFTER THE CONCRETE IS PLACED IT SHALL BE TAMPED, SCREEDED AND FINISHED TO TRUE GRADE AND SURFACE. THE FINISH SHALL BE MADE WITH A WOOD FLOAT, FOLLOWED BY A BRUSHING WITH A WET SOFT HAIR BRUSH TO A NEAT WORKMANLIKE SURFACE. TRANSVERSE EXPANSION JOINTS 1/2 INCH WIDE SHALL BE PROVIDED AT INTERVALS OF NOT LESS THAN 20 FEET AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER. LONGITUDINAL JOINTS 1/2 INCH WIDE SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS AND SHALL BE FILLED WITH PREFORMED BITUMINOUS TYPE FILLER. DRIVEWAY APRON AND SIDEWALK AT DRIVEWAY SHALL BE 4500 PSI AIR ENTRAINED CONCRETE SIX (6) INCHES THICK. APRON AT GUTTER LINE SHALL BE ONE AND ONE HALF (1 1/2) INCHES HIGHER THAN EXISTING PAVEMENT.

CONCRETE SIDEWALK ADJACENT TO CURB DETAIL
N.T.S.

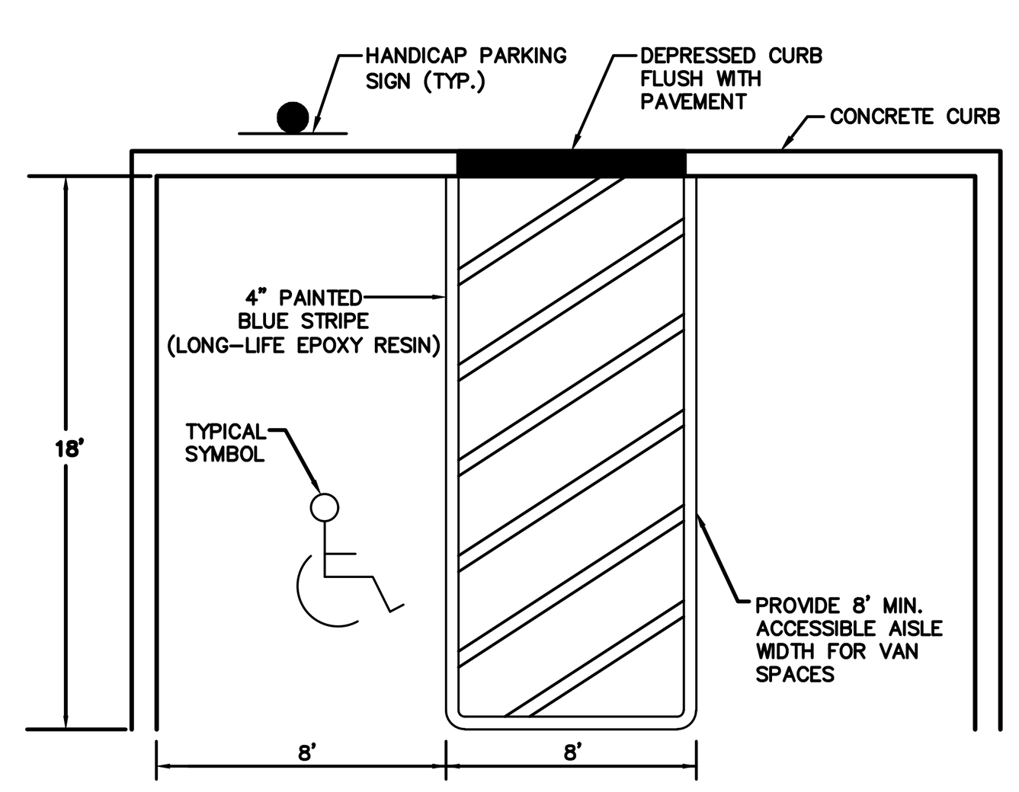


PARKING LOT AND DRIVEWAY PAVEMENT DETAIL
N.T.S.

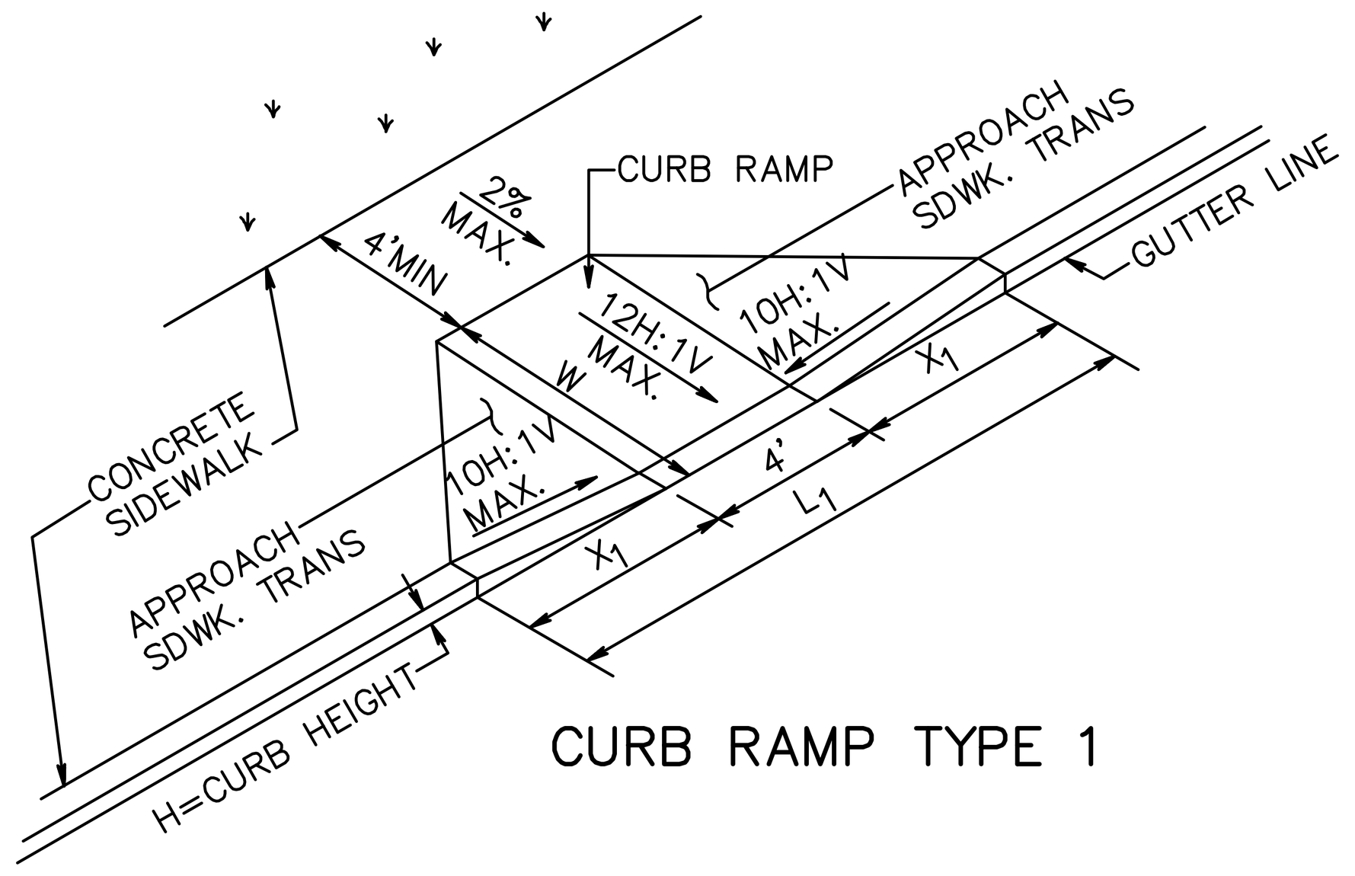


HANDICAPPED PARKING SPACE SIGN DETAILS
N.T.S.

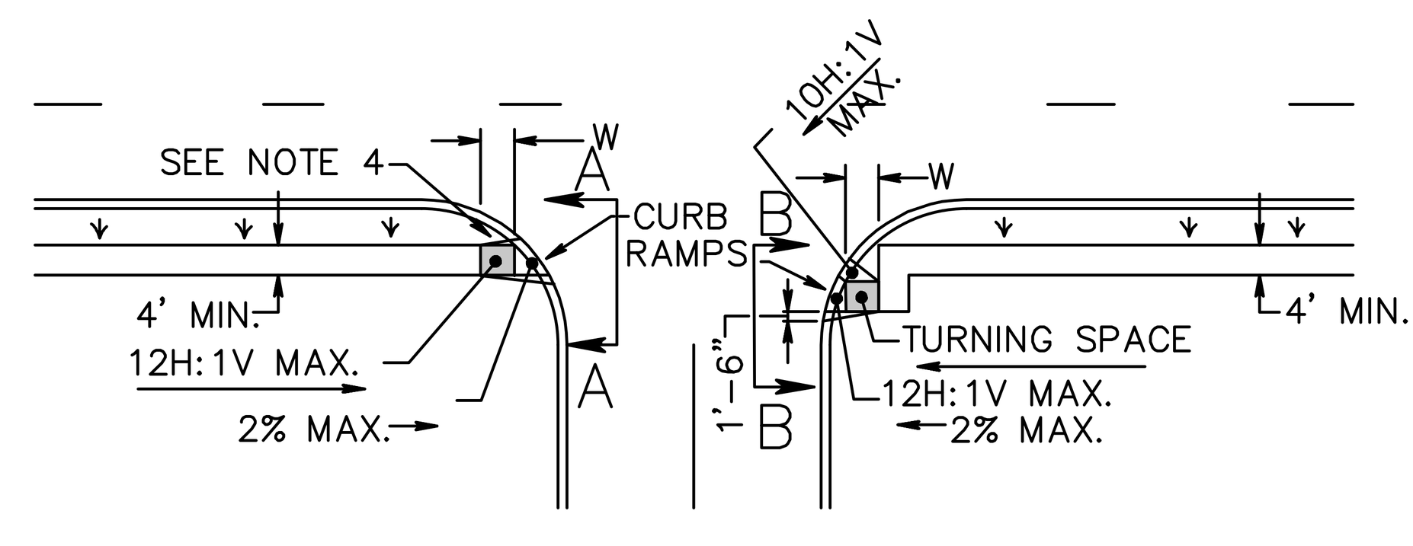
NOTE:
1. THIS DETAIL REPRESENTS THE STANDARD DETAIL FOR HANDICAP SIGN INSTALLATION, IF NEW SIGNS NEED TO BE INSTALLED, DUE TO DAMAGE TO EXISTING SIGNS.



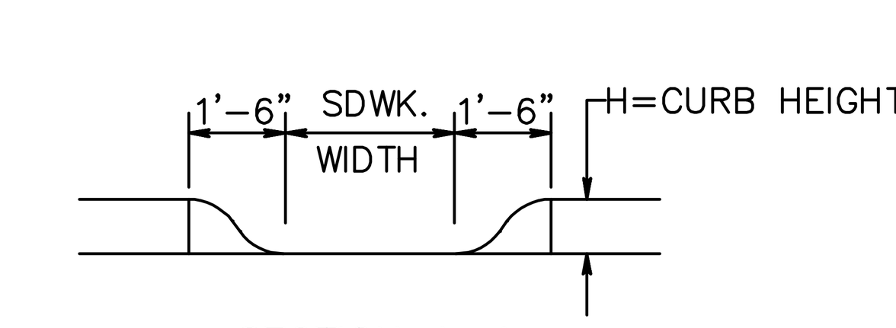
HANDICAPPED PARKING STALL DETAIL
N.T.S.



CURB RAMP TYPE 1

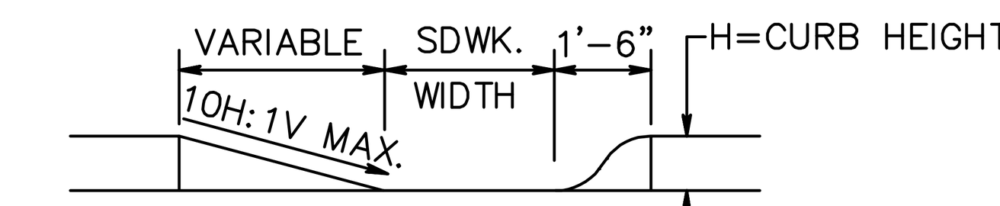


CURB RAMP TYPE 5

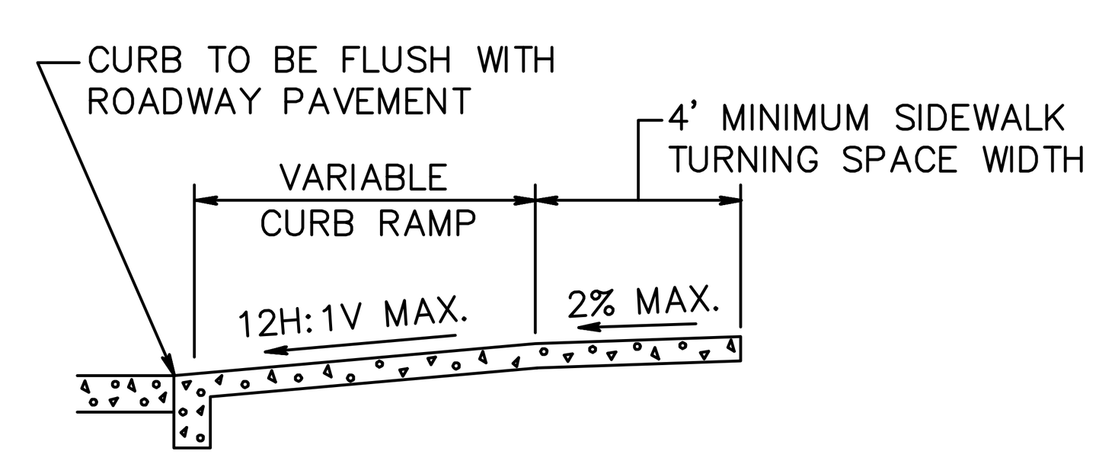


SECTION A-A

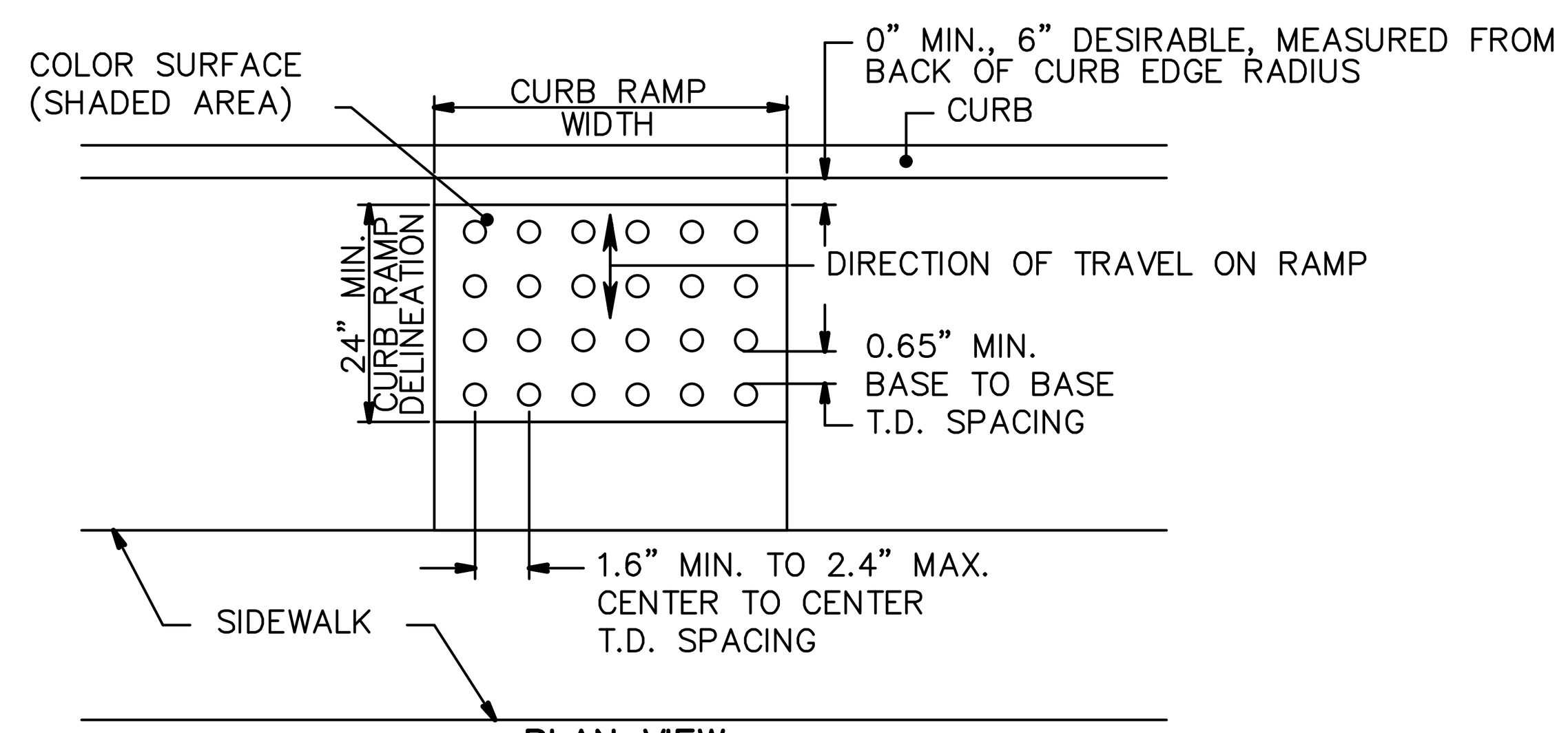
NOTE:
CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT (CURB RAMP TYPES 5 & 6).



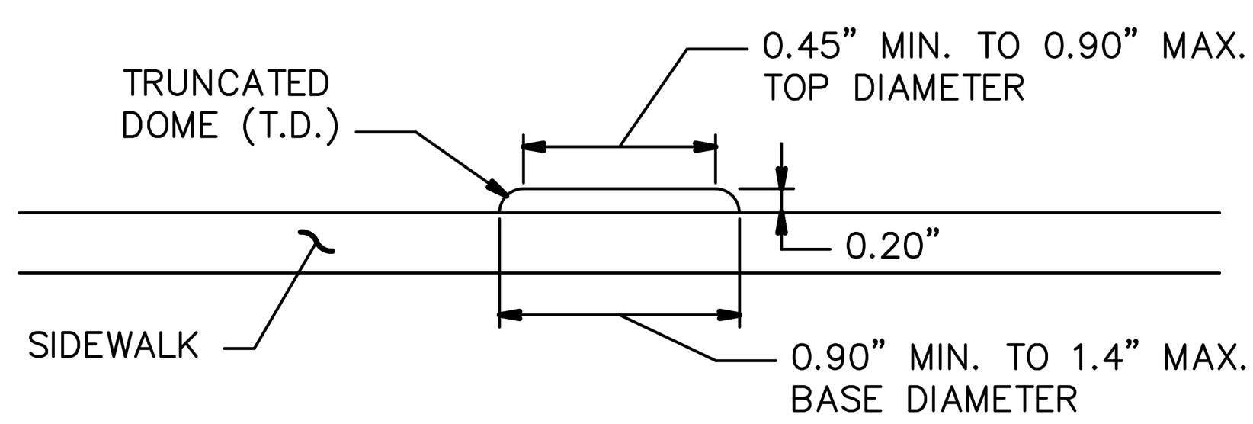
SECTION D-D



SECTION THROUGH CURB RAMPS 1 THROUGH 6

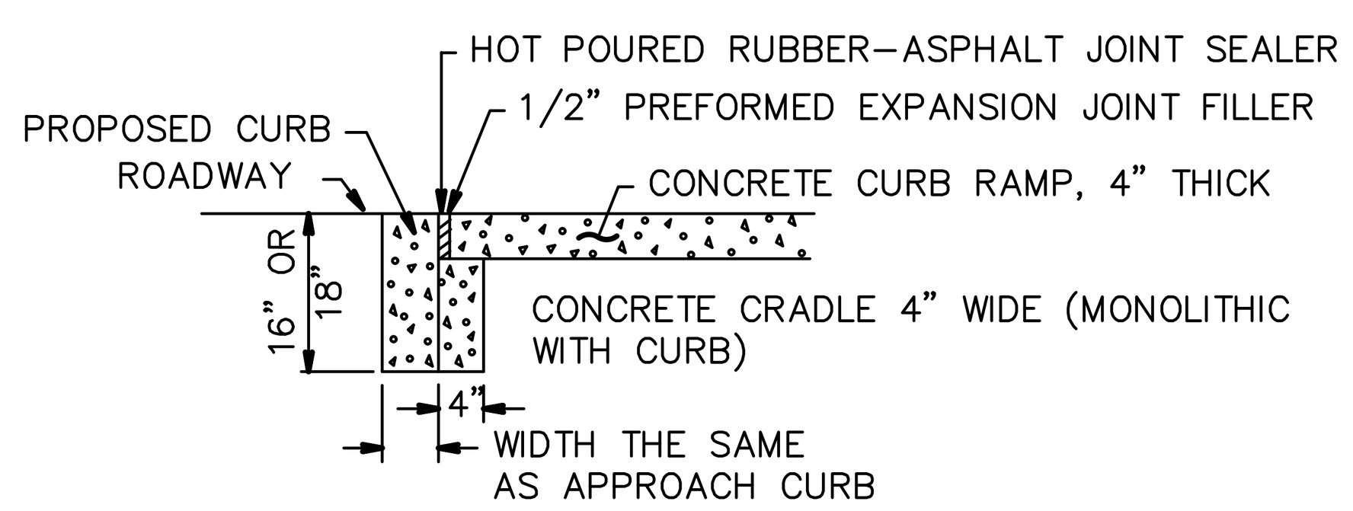


PLAN VIEW



ELEVATION

DETECTABLE WARNING SURFACE



DROPPED CURB AND CRADLE

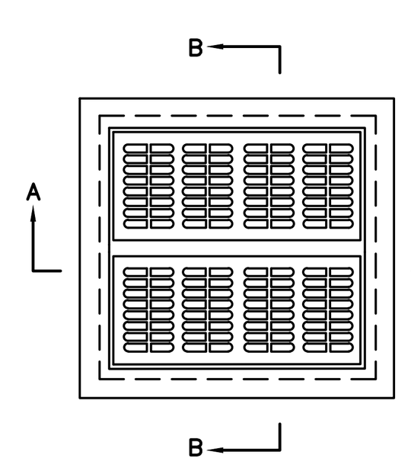
PUBLIC SIDEWALK CURB RAMP AND DETECTABLE WARNING SURFACE DETAILS
N.T.S.

NOTES:

1. KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SURFACE.
2. FOR DIMENSIONS SEE CD-606-3 AND CD-606-4
3. CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT THE ENTIRE WIDTH OF THE RAMP (4 FEET MIN.) AT ALL CURB RAMPS.
4. FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
5. SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
6. CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
7. WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, USE CURB RAMP TYPE 7, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
8. CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED. SEE PLANS.
9. THE 12H:1V MAX SLOPE IS THE RUNNING SLOPE FOR CURB RAMPS, BUT ONLY THE 12H:1V SLOPE MEASURED AS X IS THE RUNNING SLOPE FOR TYPE 3 AND TYPE 4 CURB RAMPS. ENSURE THE RUNNING SLOPE OF CURB RAMPS DOES NOT REQUIRE ITS LENGTH TO EXCEED 15 FEET. THE RUNNING SLOPE MAY EXCEED THE 12H:1V MAX SLOPE SO AS NOT TO EXCEED THE 15 FEET MAXIMUM LENGTH.
10. CURB RAMP TYPE 1 THROUGH 7 ARE NORMALLY PLACED ON THE RADIUS RETURN AT THE INTERSECTION AND ON A TANGENT SECTION AS DRAWN.

CURB RAMP TYPE 1				
H INCHES	W FEET	X_{1U} FEET	X_{1L} FEET	L_1 FEET
3	3	2.50	2.50	9.00
4	4	3.33	3.33	10.67
5	5	4.17	4.17	12.33
6	6	5.00	5.00	14.00
7	7	5.83	5.83	15.67
8	8	6.67	6.67	17.33
9	9	7.50	7.50	19.00

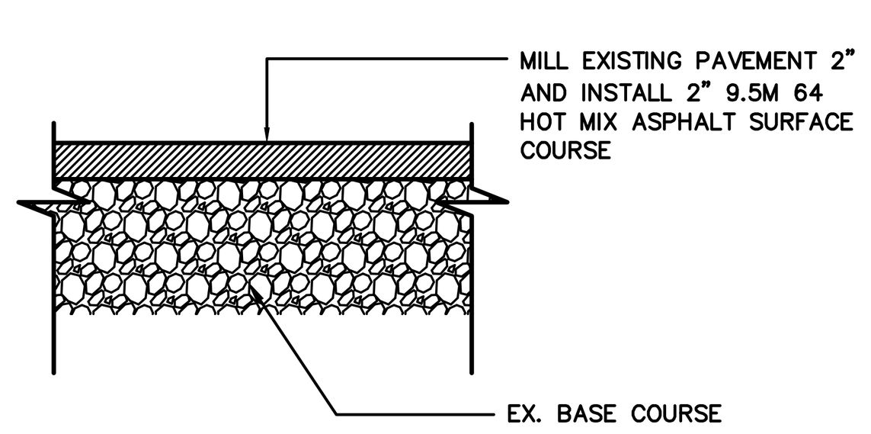
CURB RAMP TYPE 2,5 OR 6	
H INCHES	W FEET
3	3
4	4
5	5
6	6
7	7
8	8
9	9



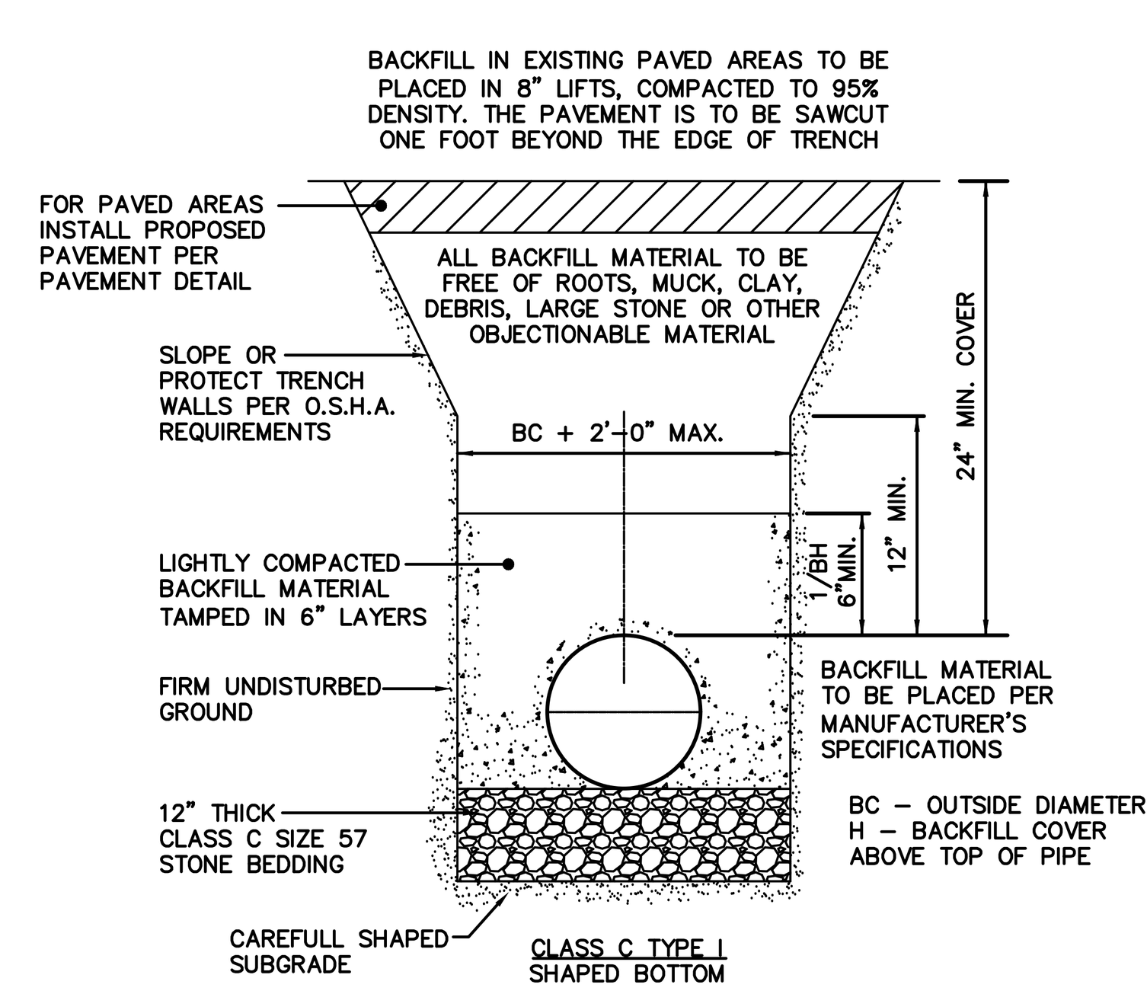
PLAN

NOTES:
1. INLET GRATE MUST BE BICYCLE SAFE
2. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN No. 3425 OR APPROVED EQUAL.

"E" INLET GRATE DETAIL
N.T.S.

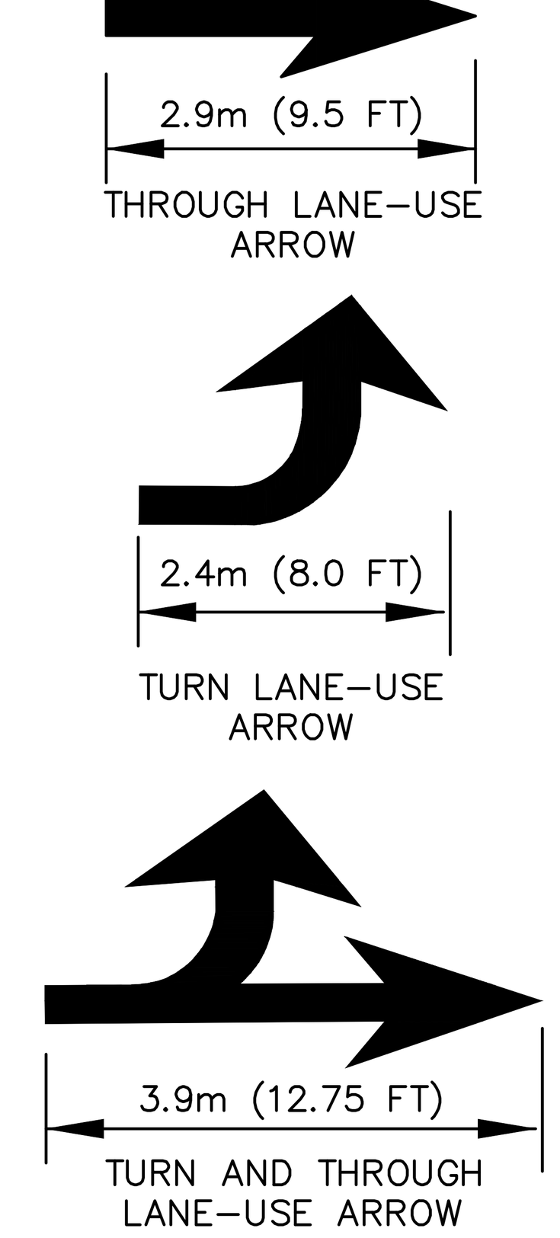


PAVEMENT DETAIL AT MILLED AREAS
N.T.S.

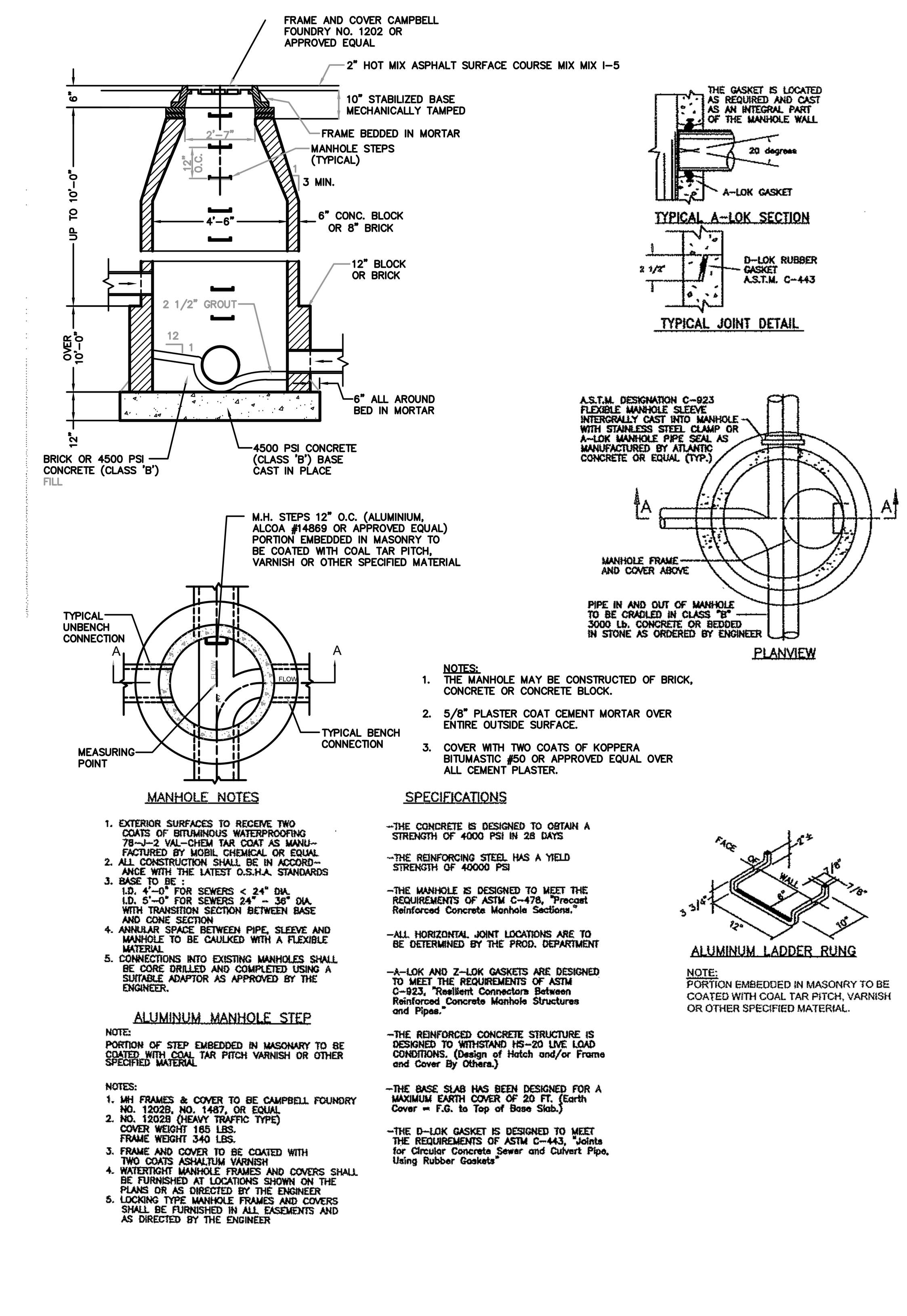


NOTE:
ALL TRENCHING OPERATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.

CONCRETE PIPE BEDDING DETAIL
N.T.S.



PAVEMENT MARKINGS DETAILS
N.T.S.



NOTES:
1. THE MANHOLE MAY BE CONSTRUCTED OF BRICK, CONCRETE OR CONCRETE BLOCK.
2. 5/8" PLASTER COAT CEMENT MORTAR OVER ENTIRE OUTSIDE SURFACE.
3. COVER WITH TWO COATS OF KOPPERA BITUMASTIC #50 OR APPROVED EQUAL OVER ALL CEMENT PLASTER.

MANHOLE NOTES

1. EXTERIOR SURFACES TO RECEIVE TWO COATS OF BITUMINOUS WATERPROOFING 78-J-2 VAL-CHEM TAR COAT AS MANUFACTURED BY MOBIL CHEMICAL OR EQUAL
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST O.S.H.A. STANDARDS
3. BASE TO BE : I.D. 4'-0" FOR SEWERS < 24" DIA. I.D. 5'-0" FOR SEWERS 24" - 36" DIA. WITH TRANSITION SECTION BETWEEN BASE AND CONE SECTION
4. ANNULAR SPACE BETWEEN PIPE, SLEEVE AND MANHOLE TO BE CAULKED WITH A FLEXIBLE MATERIAL
5. CONNECTIONS INTO EXISTING MANHOLES SHALL BE CORE DRILLED AND COMPLETED USING A SUITABLE ADAPTOR AS APPROVED BY THE ENGINEER.

ALUMINUM MANHOLE STEP

NOTE:
PORTION OF STEP EMBEDDED IN MASONARY TO BE COATED WITH COAL TAR PITCH VARNISH OR OTHER SPECIFIED MATERIAL

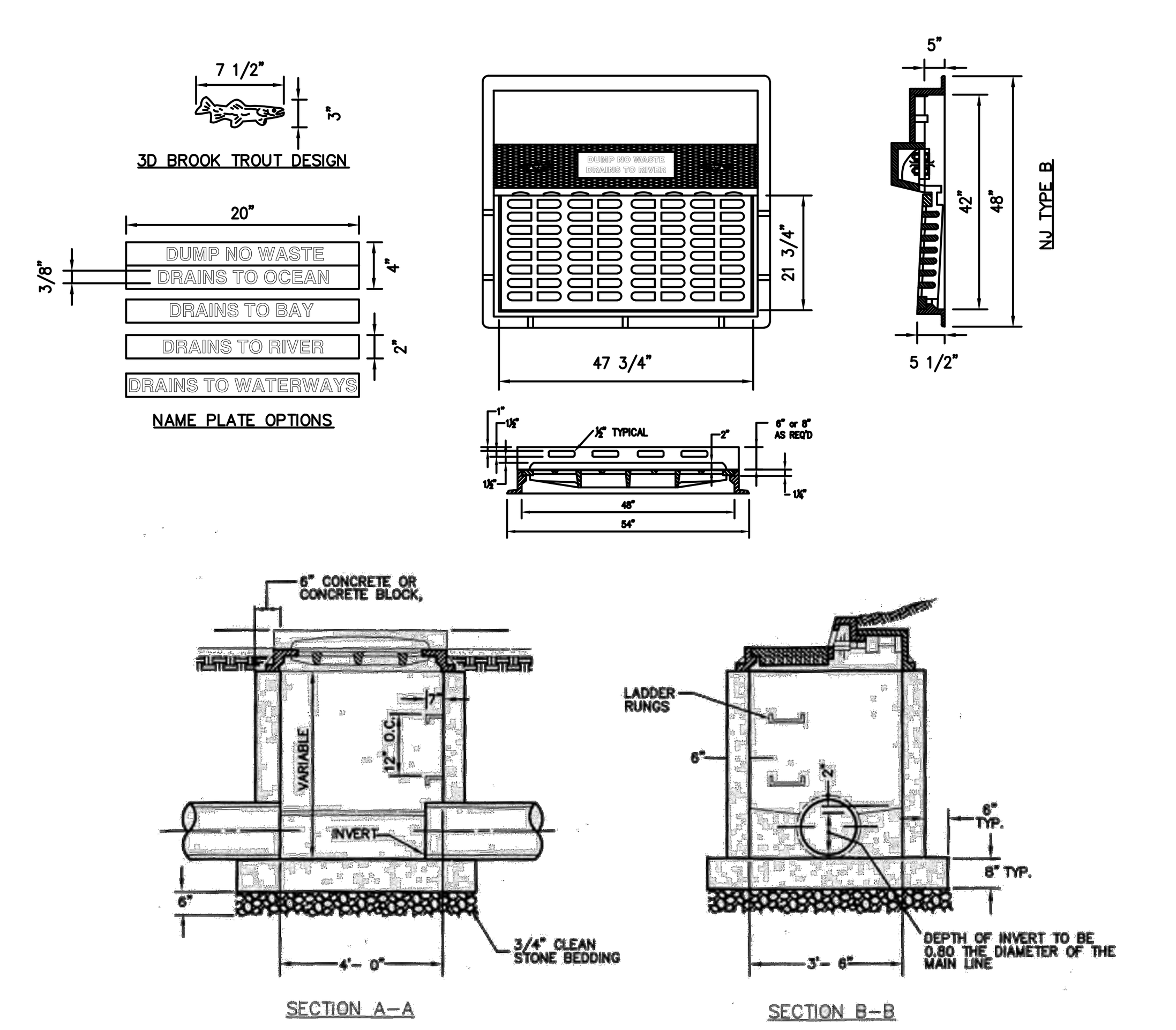
NOTES:
1. MH FRAMES & COVER TO BE CAMPBELL FOUNDRY NO. 1202B, NO. 1487, OR EQUAL
2. NO. 1202B (HEAVY TRAFFIC TYPE) COVER WEIGHT 165 LBS. FRAME WEIGHT 340 LBS.
3. FRAME AND COVER TO BE COATED WITH TWO COATS ASHALTUM VARNISH
4. WATERTIGHT MANHOLE FRAMES AND COVERS SHALL BE FURNISHED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER
5. LOCKING TYPE MANHOLE FRAMES AND COVERS SHALL BE FURNISHED IN ALL EASEMENTS AND AS DIRECTED BY THE ENGINEER

SPECIFICATIONS

- THE CONCRETE IS DESIGNED TO OBTAIN A STRENGTH OF 4000 PSI IN 28 DAYS
- THE REINFORCING STEEL HAS A YIELD STRENGTH OF 40000 PSI
- THE MANHOLE IS DESIGNED TO MEET THE REQUIREMENTS OF ASTM C-478, "Precast Reinforced Concrete Manhole Sections."
- ALL HORIZONTAL JOINT LOCATIONS ARE TO BE DETERMINED BY THE PROD. DEPARTMENT
- A-LOK AND Z-LOK GASKETS ARE DESIGNED TO MEET THE REQUIREMENTS OF ASTM C-923, "Resilient Connectors Between Reinforced Concrete Manhole Structures and Pipes."
- THE REINFORCED CONCRETE STRUCTURE IS DESIGNED TO WITHSTAND HS-20 LIVE LOAD CONDITIONS. (Design of Hatch and/or Frame and Cover By Others.)
- THE BASE SLAB HAS BEEN DESIGNED FOR A MAXIMUM EARTH COVER OF 20 FT. (Earth Cover = F.G. to Top of Base Slab.)
- THE D-LOK GASKET IS DESIGNED TO MEET THE REQUIREMENTS OF ASTM C-443, "Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets"

NOTE:
PORTION EMBEDDED IN MASONRY TO BE COATED WITH COAL TAR PITCH, VARNISH OR OTHER SPECIFIED MATERIAL.

STORM MANHOLE DETAIL
N.T.S.



NOTES:

1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
2. THIS INLET MAY BE CONSTRUCTED OF CONCRETE OR CONCRETE BLOCK, IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1:2 CEMENT SAND MORTAR. THE INSIDE WALLS JOINTS SHALL BE STRUCK & POINTED.
3. PROVIDE 7/8" DIA. x 7"x12" ALUMINUM LADDER RUNGS, 12" O.C.
4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN No. 2618 OR APPROVED EQUAL.
5. WHEN ADDTIONAL DEPTH IS SCHEDULED, WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE TOP OF GRATE TO INVERT, SHALL BE 12" THICK IF CONCRETE, OR DOUBLE BLOCK IF BLOCK, THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND 12" IN DEPTH.
6. CLASS "C" CONCRETE TO BE USED IF CONSTRUCTED OF CAST IN PLACE CONCRETE OR CONCRETE BLOCK AND CLASS "B" CONCRETE TO BE USED IF PRECAST CONCRETE.
7. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.

TYPE "B" INLET DETAIL
N.T.S.

CODE REVIEW:

CERTIFICATE:

spiezle

SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

SIGNATURE:

THOMAS S. PERRINO	21AI01505400
SCOTT E. DOWNIE	21AI01674400
STEVEN LEONE	21AI01170100
STEVEN G. SIEGEL	21AI01564200
ANGELO ALBERTO	21AI01046700
JOHN F. WRIGHT	21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC.	21AC00063000

SEAL:

CONSULTANTS:

B&G Engineering LLC
State of N.J. Certificate of Authorization: 24GA28168000
30 BERNARD DRIVE
EWING, N.J. 08628
Phone (732) 598-6616
Fax (609) 671-0715

BESRICK G. PLUMMER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 39534

PROJECT:
PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL
601 ERNSTON ROAD, PARLIN, NJ 08859
LOT 2102, BLOCK 447.06
BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NJ
FOR

SAYREVILLE PUBLIC SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW:

REVISIONS:

#	REVISION NAME	DATE

FOR BID:

DRAWING TITLE:
CONSTRUCTION DETAILS

COMMISSION NUMBER:
25K011

B&G PROJECT NO.: 2401A

DRAWING NUMBER:
SW-7

THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"x42"

R5 - 1 [30" X 30"]
(6.3 S.F.)

R5 -1 (S) [36" X 36"]
(9 S. F.)

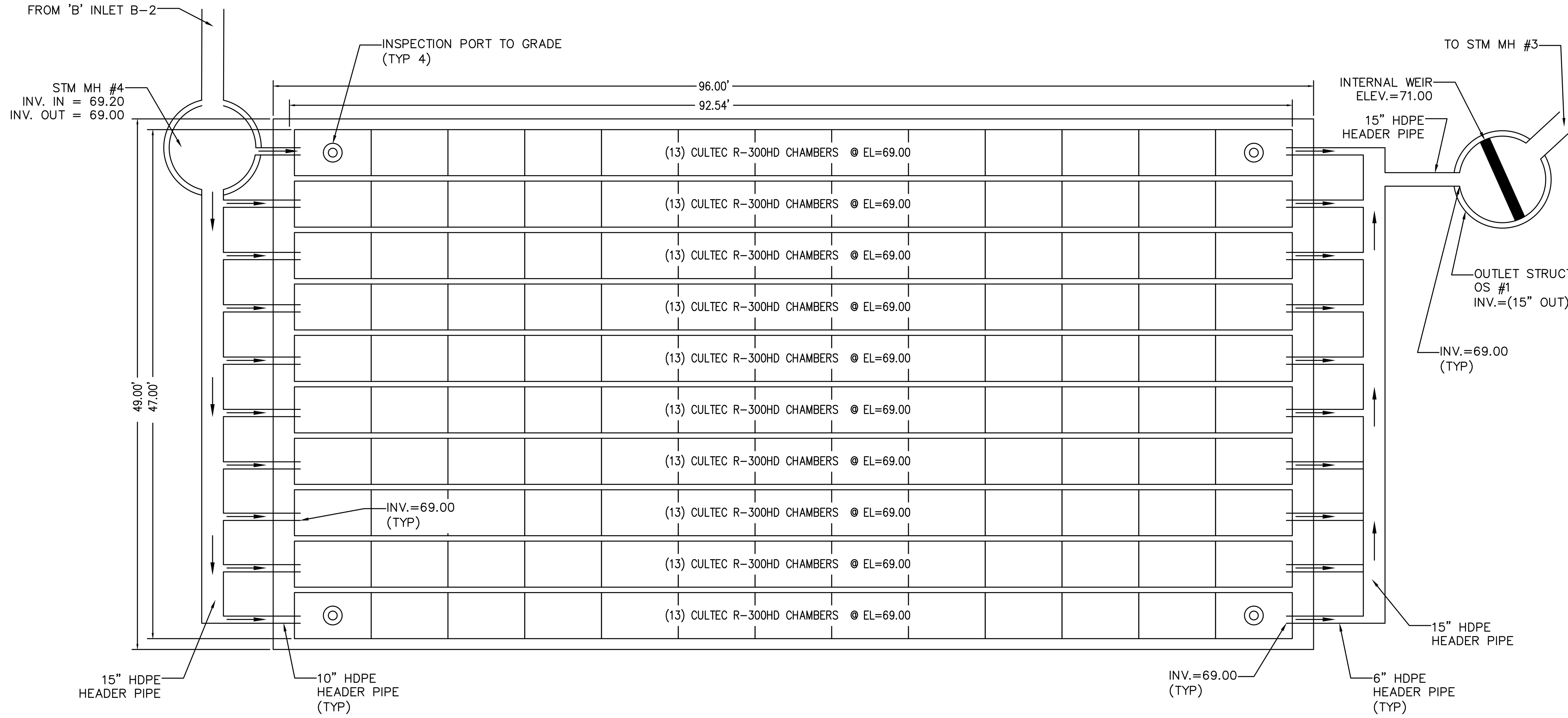
R1 - 1 [30"x 30"]
(5.5 S.F.)

(L or R)
R6 - 1 [36" X 12"]
(3 S.F.)

"BUSES ONLY"
SIGN
24"x18"

"STAFF PARKING
ONLY SIGN"
18"X12"

TRAFFIC SIGN DETAILS
N.T.S.



UNDERGROUND DETENTION
SYSTEM DETAIL
N.T.S.

(SYSTEM TO BE MANUFACTURED BY
CULTEC INC. OR APPROVED EQUAL)

CODE REVIEW:

CERTIFICATE:

spiezle

SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

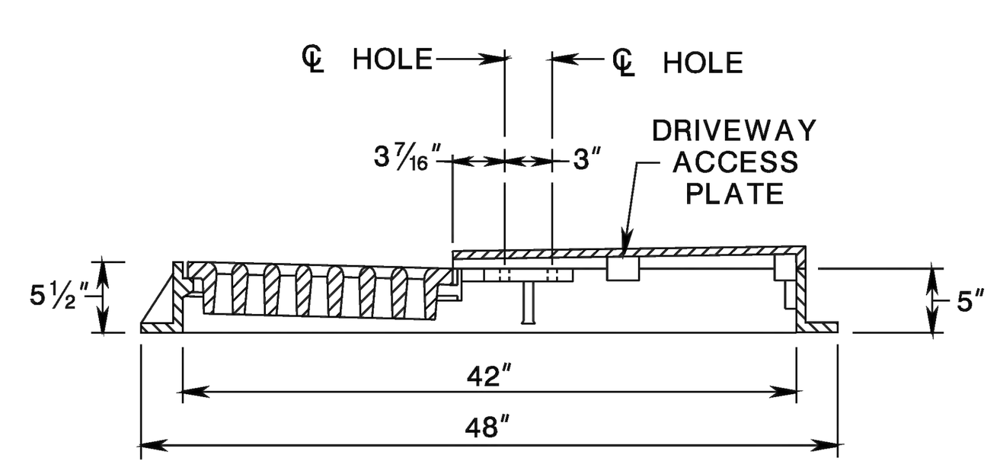
SIGNATURE:
THOMAS S. PERRINO 21AI01505400
SCOTT E. DOWNIE 21AI01674400
STEVEN LEONE 21AI01170100
STEVEN G. SIEGEL 21AI01564200
ANGELO ALBERTO 21AI01046700
JOHN F. WRIGHT 21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC. 21AC00063000

SEAL:

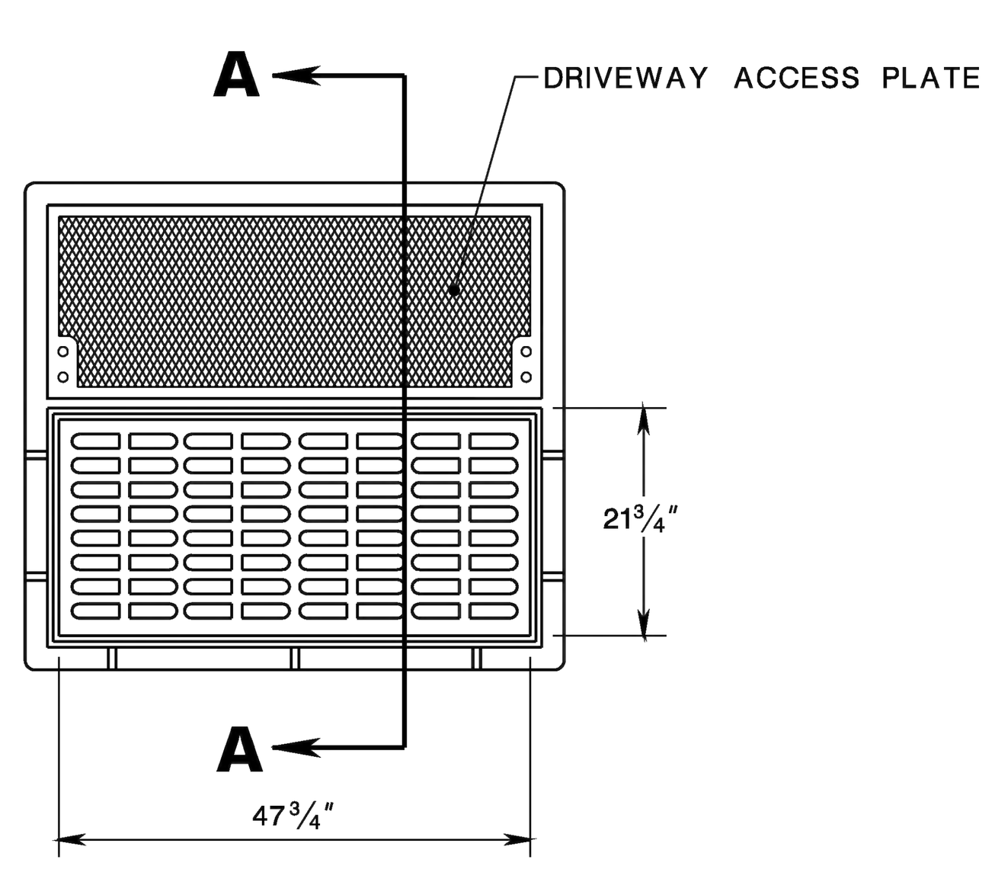
CONSULTANTS:
B&G
Engineering LLC
State of N.J. Certificate of Authorization: 24GA28168000
30 BERNARD DRIVE
EWING, N.J. 08628
Phone (732) 598-6616
Fax (609) 671-0715

BESRICK G. PLUMMER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 39534

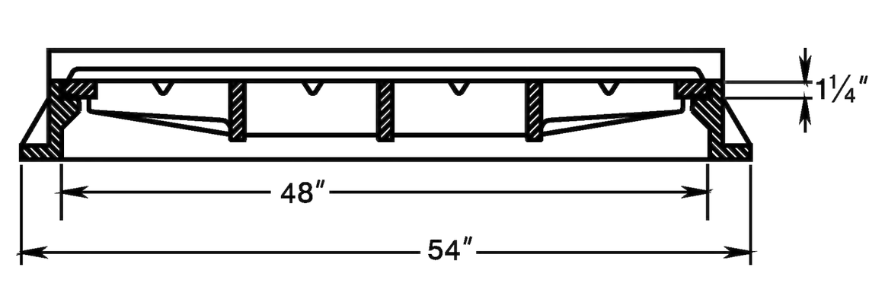
WEIGHT OF PLATE = 300 LBS



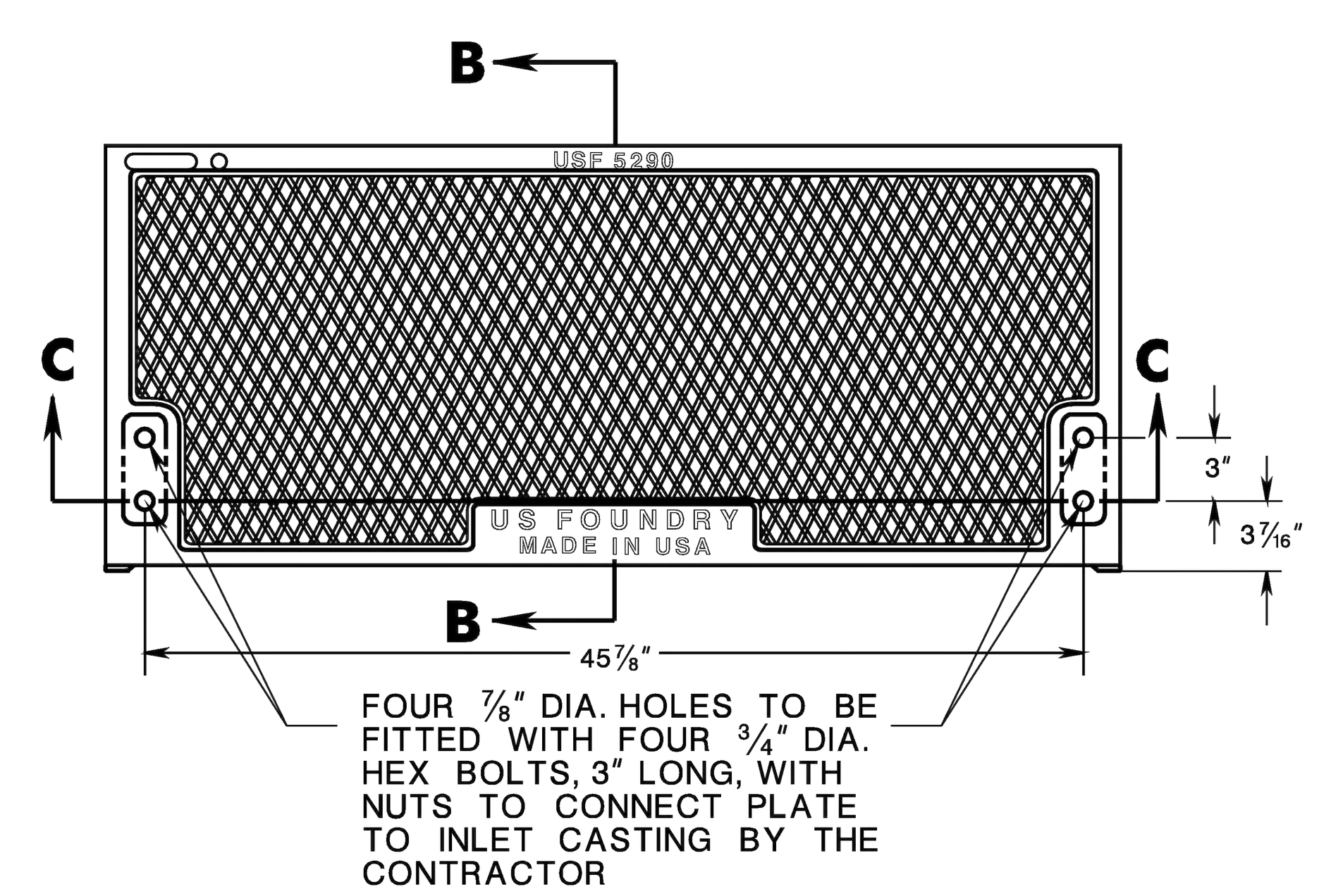
SECTION A–A

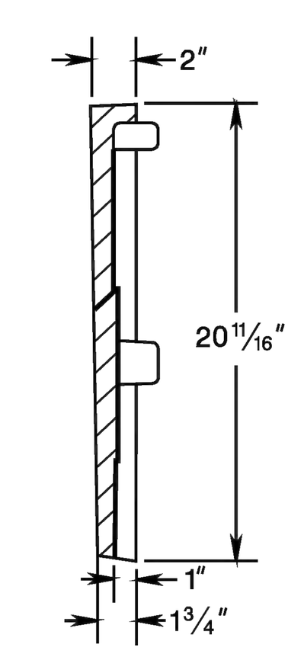


PLAN

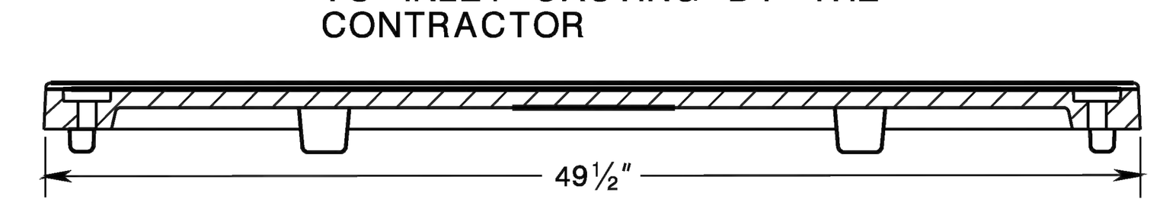


FRONT ELEVATION





SECTION B–B

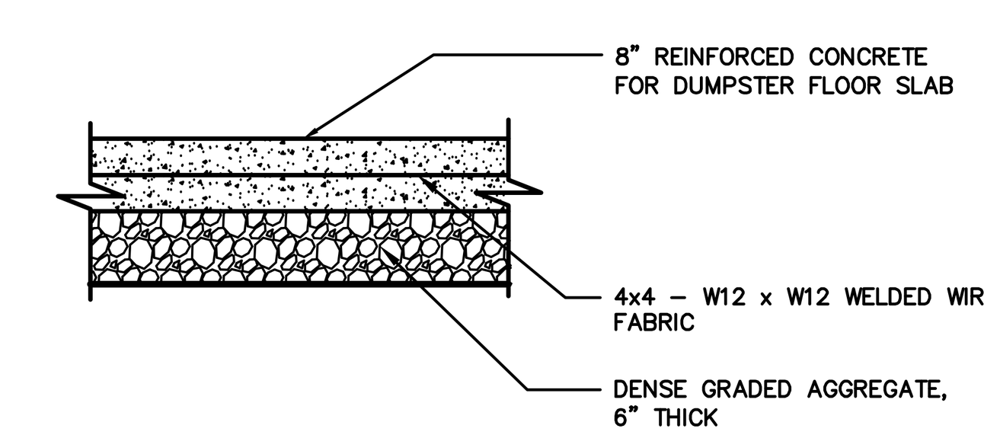


SECTION C–C

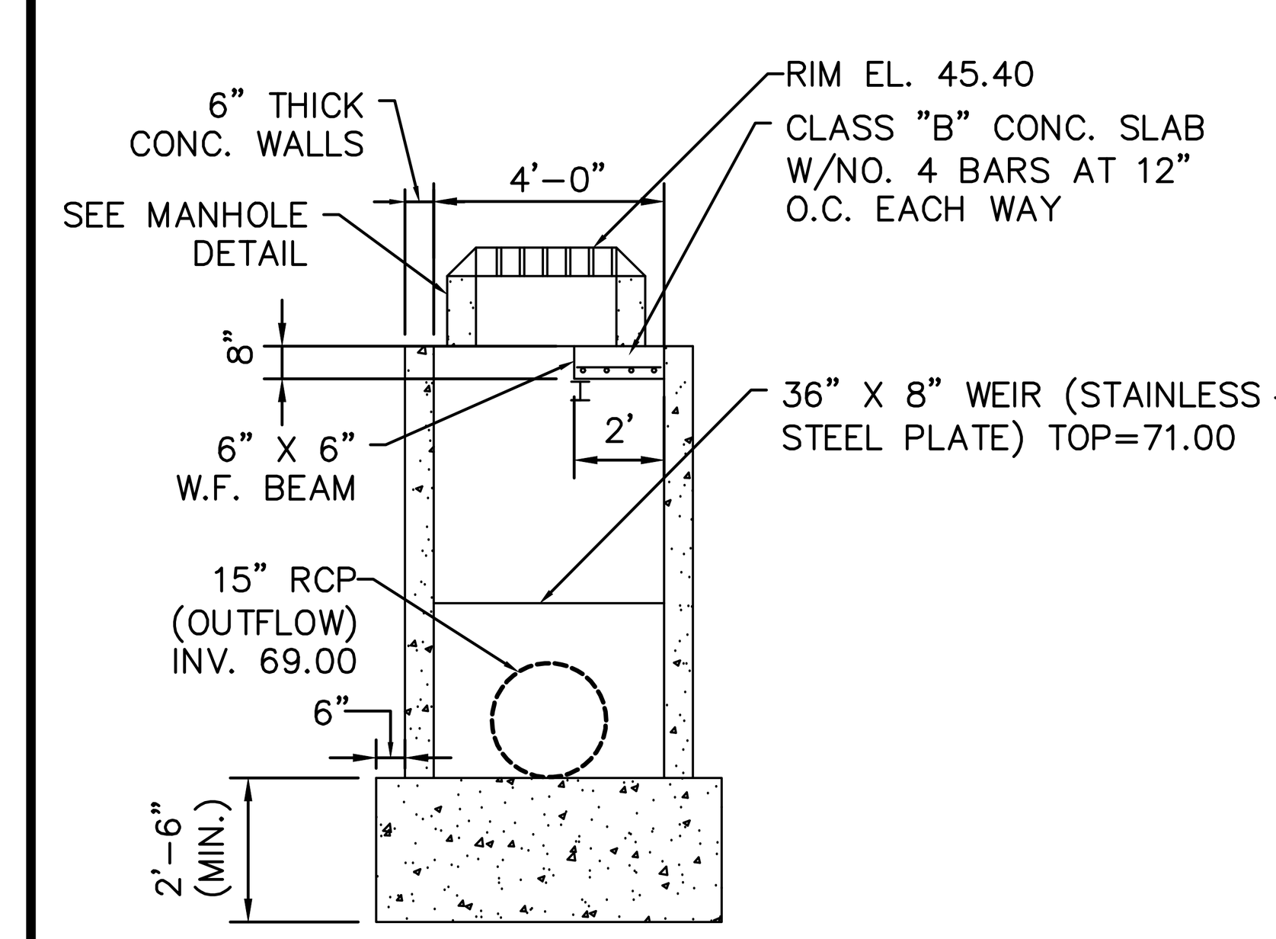
FRONT ELEVATION

NOTES:
1. USE DRIVEWAY ACCESS PLATE ON TYPE B, B1, B2, OR C INLET WHERE CURB PIECE HEIGHT OF 2 INCHES IS REQUIRED AT DRIVEWAYS OR AT GUIDE RAIL TERMINALS.
2. THE NEW INLET TYPE B OR TYPE C CASTING WILL BE FITTED WITH DRIVEWAY ACCESS PLATE IN LIEU OF CURB PIECE. PAYMENT WILL BE MADE UNDER EITHER "SET INLET TYPE B, CASTING" OR "RECONSTRUCTED INLET, TYPE _ , USING NEW CASTING."
3. SEE INLET TYPE B AND TYPE C CASTING DETAIL.

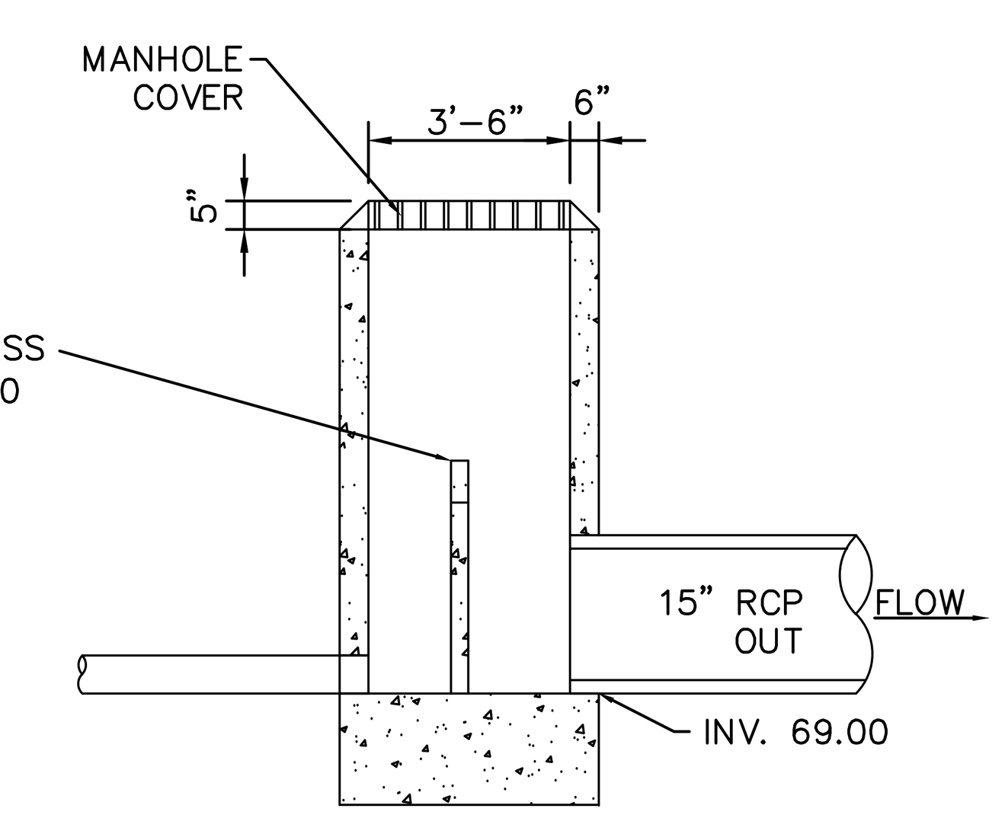
DRIVEWAY ACCESS PLATE DETAILS FOR
INLET TYPE B AND TYPE C CASTING
N.T.S.



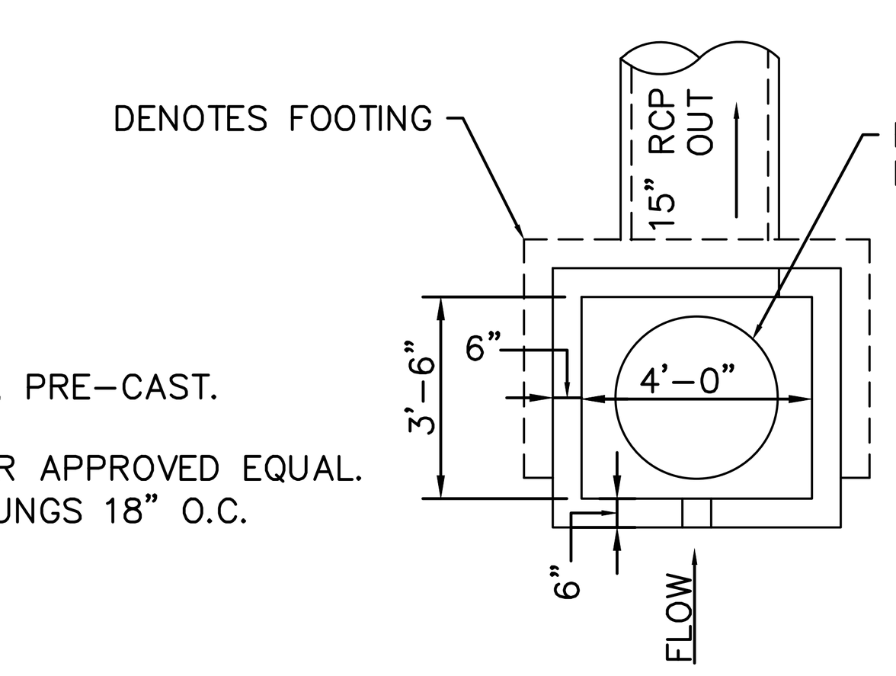
CONCRETE SLAB DETAIL AT
DUMPSTER ENCLOSURE
N.T.S.



ELEVATION



PROFILE



PLAN

NOTES:
1. STRUCTURE TO BE CONCRETE CLASS "B", PRE-CAST.
2. FOOTING TO BE CONCRETE CLASS "C".
3. RIM TO BE CAMPBELL FOUNDRY #1202 OR APPROVED EQUAL.
4. PROVIDE 3/4" DIA. ALUMINUM LADDER RUNGS 18" O.C.

OUTLET STRUCTURE DETAIL
N.T.S.

PROJECT:
PARKING LOT EXPANSION
AT EISENHOWER
ELEMENTARY SCHOOL
601 ERNSTON ROAD, PARLIN, NJ 08859
LOT 2102, BLOCK 447.06
BOROUGH OF SAYREVILLE,
MIDDLESEX COUNTY, NJ
FOR

SAYREVILLE PUBLIC
SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW:

REVISIONS:

#	REVISION NAME	DATE

FOR BID:

DRAWING TITLE:
CONSTRUCTION
DETAILS

COMMISSION NUMBER:
25K011

B&G PROJECT NO.: 2401A

DRAWING
NUMBER:
SW-8

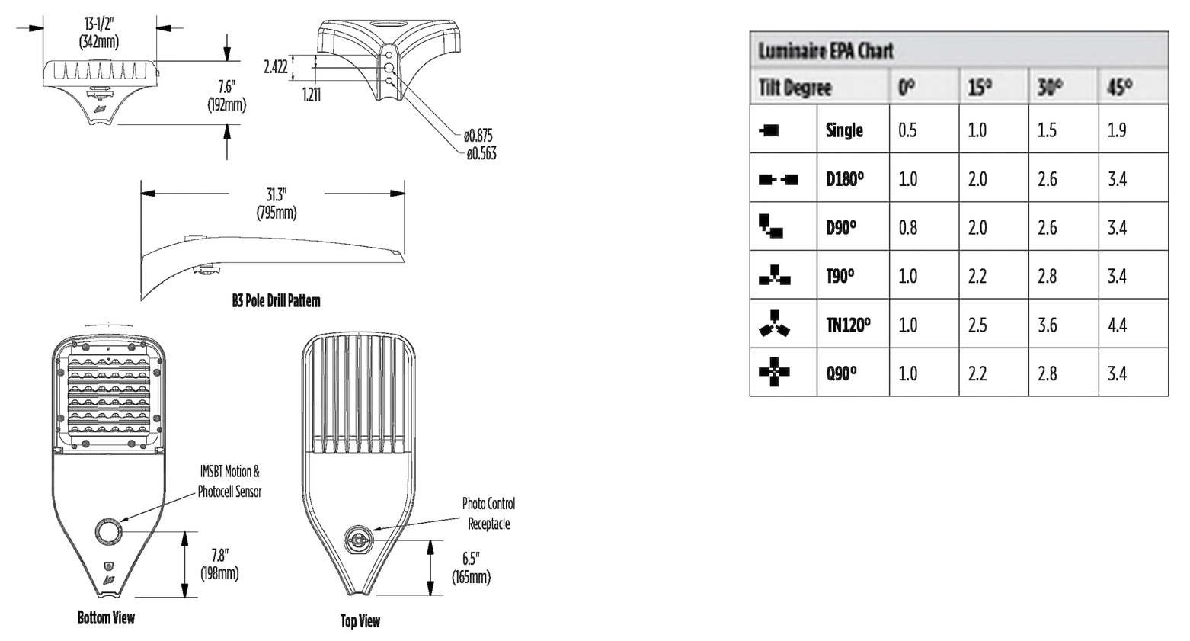
THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"x42"

Mirada Medium Outdoor LED Area Light

Type : ____________

Have questions? Call us at (800) 436-7800

PRODUCT DIMENSIONS



Luminaire EPA Chart

Tilt Degree		0º	15º	30º	45º
	Single	0.5	1.0	1.5	1.9
	D180º	1.0	2.0	2.6	3.4
	D90º	0.8	2.0	2.6	3.4
	T90º	1.0	2.2	2.8	3.4
	TN120º	1.0	2.5	3.6	4.4
	Q90º	1.0	2.2	2.8	3.4

A4 LIGHT FIXTURE DETAILS
N.T.S.

Catalog # : ____________ Project : ____________ Type : A4

Prepared By : ____________ Date : ____________

Mirada Medium (MRM)
Outdoor LED Area Light

IP66 IK08

OVERVIEW	
Lumen Package	7,000 - 55,000
Wattage Range	48 - 438
Efficacy Range (LPW)	115 - 162
Weight lbs(kg)	30 (13.6)
Control Options	IMSBT, ALB, ALS, 7-Pin, PCI

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction
- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Designed to mount to square or round poles.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 37 lbs in carton.

Optical System
- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 4, 5W, FT, FTA, AM, and LC/RC.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93-95%.
- Zero uplight.
- Available in 5000K, 4000K, 3500K, 3000K and 2700K color temperatures per ANS C78.377. Also Available in Phospho Converted Amber with Peak intensity at 610nm.
- 70 or 80CRI Minimum.
- Integral louver (IL) and integral half louver (IH) options available for enhanced backlight control.

Electrical
- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance chart)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 42L and 48L lumen packages rated to +40°C. 55L lumen package rate to +35°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls
- Optional integral passive infrared Bluetooth™ motion. Fixtures operate independently and can be commissioned via iOS or Android configuration app
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see controls section for more details).

Installation
- Designed to mount to square or round poles.
- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes LSI's traditional 3" drill pattern B3 for easy fastening of LSI products.

Warranty
- LSI LED Fixtures carry a 5-year warranty.

Listings
- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- Dark Sky compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- RoHS compliant
- Suitable for wet Locations.
- IP66 rated Luminaire per IEC 60598.
- 3G rated for ANSI C136.31 high vibration applications are qualified.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- Patented Silicone Optics (US Patent NO. 10,816,165 B2)

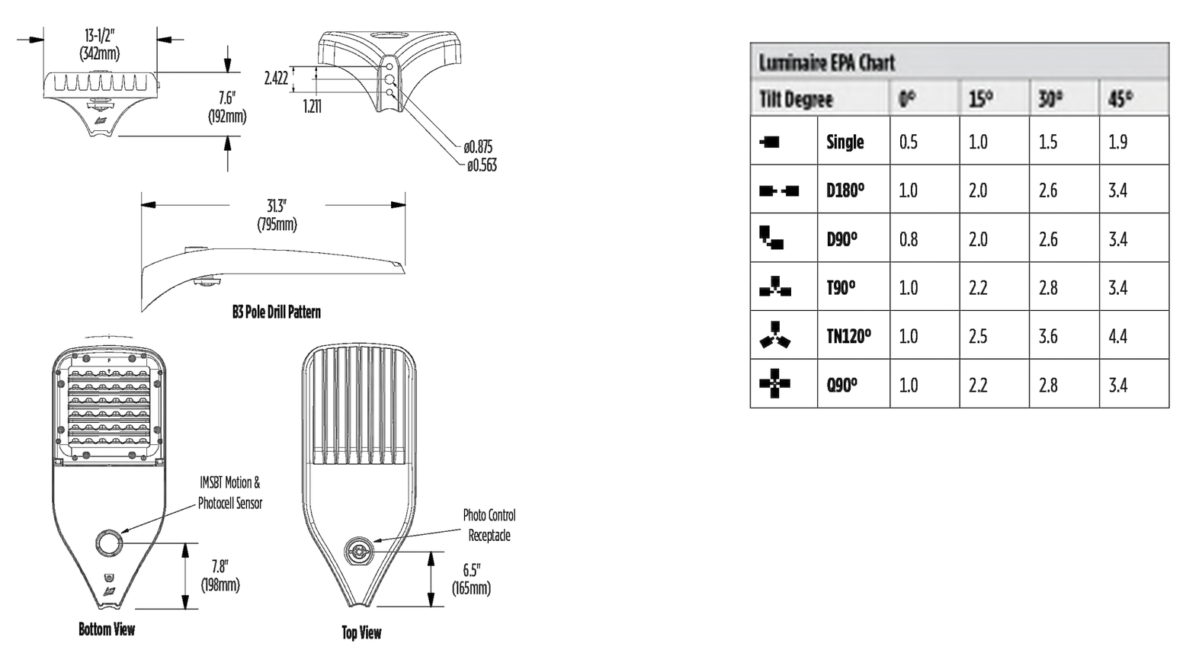
A4 LIGHT FIXTURE SPECIFICATIONS
N.T.S.

Mirada Medium Outdoor LED Area Light

Type : ____________

Have questions? Call us at (800) 436-7800

PRODUCT DIMENSIONS



Luminaire EPA Chart

Tilt Degree		0º	15º	30º	45º
	Single	0.5	1.0	1.5	1.9
	D180º	1.0	2.0	2.6	3.4
	D90º	0.8	2.0	2.6	3.4
	T90º	1.0	2.2	2.8	3.4
	TN120º	1.0	2.5	3.6	4.4
	Q90º	1.0	2.2	2.8	3.4

A5 LIGHT FIXTURE DETAILS
N.T.S.

Catalog # : ____________ Project : ____________ Type : A5

Prepared By : ____________ Date : ____________

Mirada Medium (MRM)
Outdoor LED Area Light

IP66 IK08

OVERVIEW	
Lumen Package	7,000 - 55,000
Wattage Range	48 - 438
Efficacy Range (LPW)	115 - 162
Weight lbs(kg)	30 (13.6)
Control Options	IMSBT, ALB, ALS, 7-Pin, PCI

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction
- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Designed to mount to square or round poles.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 37 lbs in carton.

Optical System
- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 4, 5W, FT, FTA, AM, and LC/RC.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93-95%.
- Zero uplight.
- Available in 5000K, 4000K, 3500K, 3000K and 2700K color temperatures per ANS C78.377. Also Available in Phospho Converted Amber with Peak intensity at 610nm.
- 70 or 80CRI Minimum.
- Integral louver (IL) and integral half louver (IH) options available for enhanced backlight control.

Electrical
- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance chart)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 42L and 48L lumen packages rated to +40°C. 55L lumen package rate to +35°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

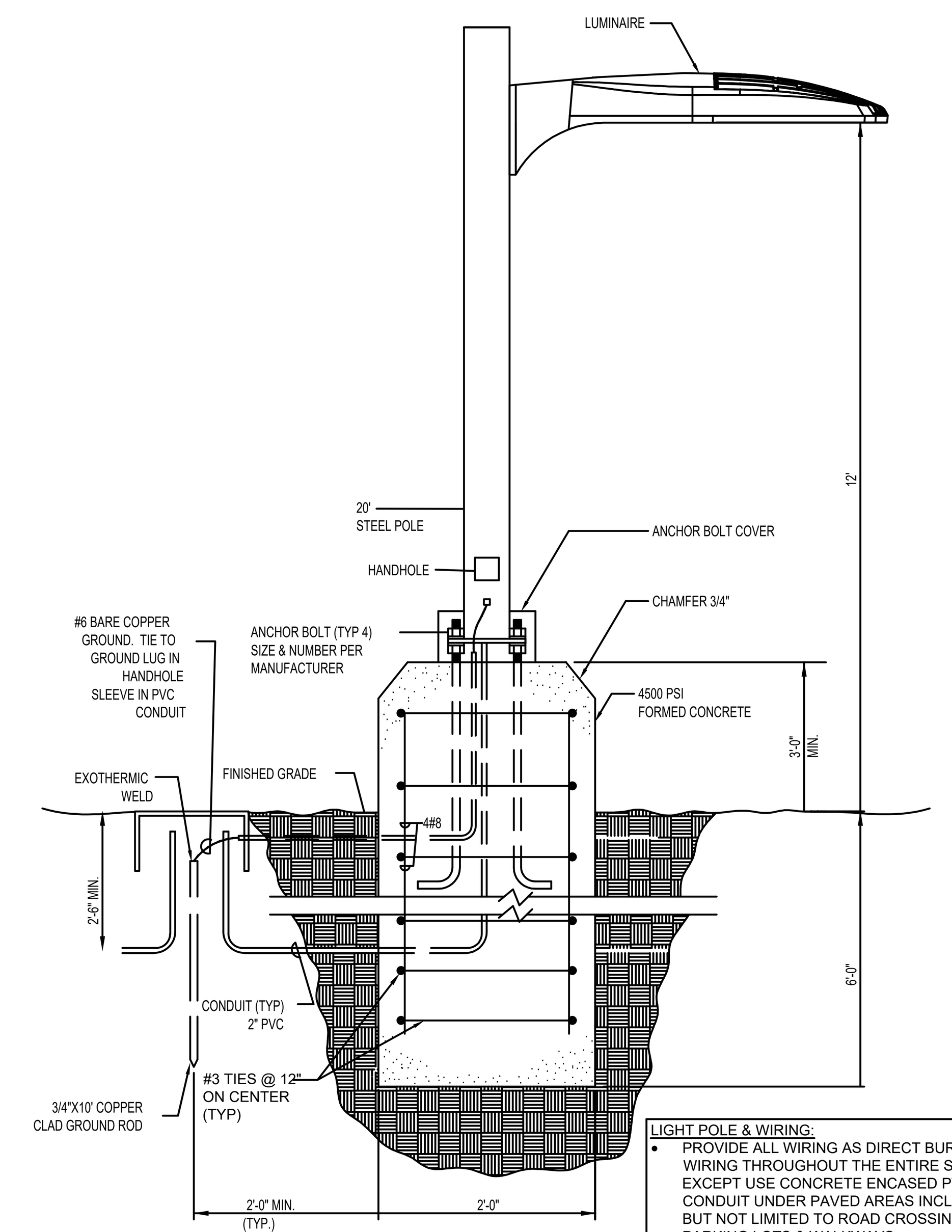
Controls
- Optional integral passive infrared Bluetooth™ motion. Fixtures operate independently and can be commissioned via iOS or Android configuration app
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see controls section for more details).

Installation
- Designed to mount to square or round poles.
- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes LSI's traditional 3" drill pattern B3 for easy fastening of LSI products.

Warranty
- LSI LED Fixtures carry a 5-year warranty.

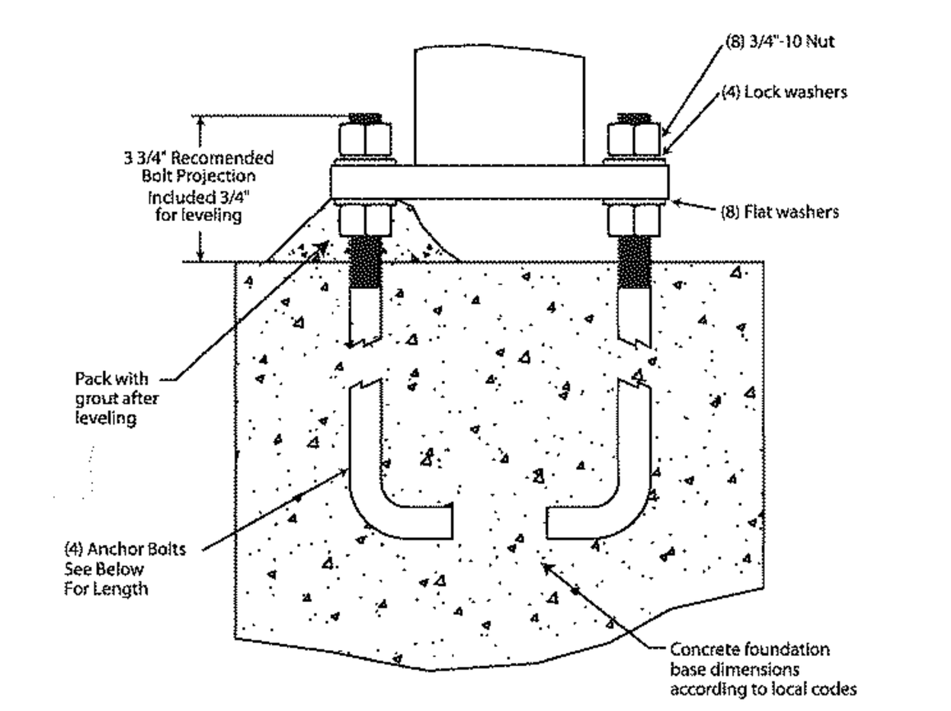
Listings
- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- Dark Sky compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- RoHS compliant
- Suitable for wet Locations.
- IP66 rated Luminaire per IEC 60598.
- 3G rated for ANSI C136.31 high vibration applications are qualified.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- Patented Silicone Optics (US Patent NO. 10,816,165 B2)

A5 LIGHT FIXTURE SPECIFICATIONS
N.T.S.



LIGHT POLE & WIRING:
- PROVIDE ALL WIRING AS DIRECT BURIAL UF WIRING THROUGHOUT THE ENTIRE SITE EXCEPT USE CONCRETE ENCASED PVC CONDUIT UNDER PAVED AREAS INCLUDING BUT NOT LIMITED TO ROAD CROSSINGS, PARKING LOTS & WALKWAYS.
- ELEVATED CONCRETE LAMP POST BASE.

POLE MOUNTED SITE LIGHT DETAIL
N.T.S.



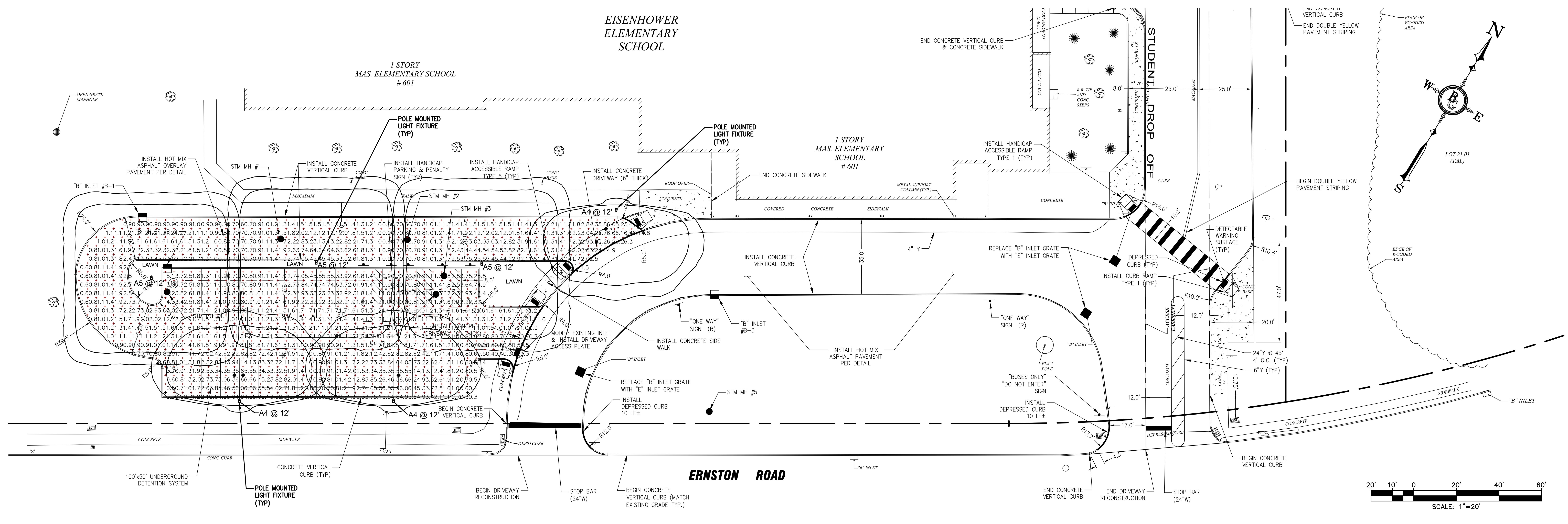
LIGHT POLE ANCHOR BOLT DETAIL
N.T.S.

LIGHT FIXTURE SCHEDULE

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens per Lamp	Lumen Multiplier	LLF	Wattage	Notes
	A4	3	LSI INDUSTRIES, INC.	MRM-LED-09L-SIL-4-30--70CRI-IL	LED ARM MOUNT AREA LIGHT, TYPE 4 SILICONE OPTICS	LED 3000K	1	MRM-LED-09L-SIL-4-30-70CRI-IL.ies	6146	1	0.9	62	
	A5	3	LSI INDUSTRIES, INC.	MRM-LED-09L-SIL-5W-30-70CRI	LED ARM MOUNT AREA LIGHT, TYPE 5 SILICONE OPTICS	LED 3000K	1	MRM-LED-09L-SIL-5W-30-70CRI.ies	9506	1	0.9	62	

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
New Parking	+	1.9 fc	6.6 fc	0.3 fc	22.0:1	6.3:1



20' 10' 0 20' 40' 60'

SCALE: 1"=20'

CODE REVIEW:

CERTIFICATE:

spiezle

SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

SIGNATURE:

THOMAS S. PERRINO	21AI01505400
SCOTT E. DOWNIE	21AI01674400
STEVEN LEONE	21AI01170100
STEVEN G. SIEGEL	21AI01564200
ANGELO ALBERTO	21AI01046700
JOHN F. WRIGHT	21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC.	21AC00063000

SEAL:

CONSULTANTS:

B&G Engineering LLC
State of N.J. Certificate of Authorization: 24GA28168000
30 BERNARD DRIVE
EWING, N.J. 08628
Phone (732) 598-6616
Fax (609) 671-0715

BESRICK G. PLUMMER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 39534

PROJECT:
PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL
601 ERNSTON ROAD, PARLIN, NJ 08859
LOT 2102, BLOCK 447.06
BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NJ
FOR

SAYREVILLE PUBLIC SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW:

REVISIONS:

#	REVISION NAME	DATE

FOR BID:

DRAWING TITLE:
PARKING LOT LIGHTING PLAN

COMMISSION NUMBER:
25K011

B&G PROJECT NO.: 2401A

DRAWING NUMBER:
SW-9

THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"x42"

ELECTRICAL LEGEND

NOTE: NOT ALL DEVICES SHOWN ON THE LEGEND ARE USED ON THIS PROJECT

	FLUORESCENT LIGHT FIXTURE (UPPER CASE LETTER DENOTES TYPE, LOWER CASE LETTER DENOTES SWITCHING GROUP)
	LIGHT FIXTURE WITH EMERGENCY LAMP SOCKET
	INCANDESCENT, FLUORESCENT OR H.I.D. LIGHT FIXTURE
	NORMAL-EMERGENCY FIXTURE
	EMERGENCY ONLY FIXTURE
	WALL SCONCE
	POLE-MOUNTED SITE LIGHT
S	SINGLE POLE SWITCH (LOWER CASE LETTER DENOTES GROUP TO BE SWITCHED)
S_D	DIMMER SWITCH
S_3	3-WAY SWITCH
S_4	4-WAY SWITCH
S_F	FAN SWITCH
S_K	KEY SWITCH
S_{LV}	LOW VOLTAGE SWITCH
S_{OR}	OVERRIDE SWITCH
S_M	MOMENTARY SWITCH, UP, DOWN, SPRING RETURN TO CENTER OFF
S_P	SWITCH WITH PILOT LIGHT
S_T	TIMED TO OFF SWITCH
BR	BODINE LIGHTING CONTROL RELAY
$\oplus_{CT}$	DUPLEX CONVENIENCE OUTLET (CT DENOTES COUNTERTOP HEIGHT)
$\oplus_{DC}$	DUPLEX OUTLET SUSPENDED FROM DROP CORD
	DUPLEX ISOLATED GROUND OUTLET
	DOUBLE DUPLEX (QUADRUPLEX) OUTLET
	QUADRUPLEX ISOLATED GROUND OUTLET
	SPECIAL PURPOSE OUTLET
$\oplus_R$	RANGE OUTLET, 50AMP 3 WIRE
	TELEPHONE OUTLET (POTS LINE)
$\blacktriangledown_P$	PAY TELEPHONE OUTLET
$\blacktriangledown_M$	INTERCOM CALL CONTROL CONSOLE TELEPHONE SYSTEM OUTLET
$\blacktriangledown_A$	INTERCOM ADMINISTRATION DISPLAY TELEPHONE SYSTEM OUTLET
$\triangledown_A$	INTERCOM ADMINISTRATION DESK TELEPHONE SYSTEM OUTLET
$\triangledown$	INTERCOM STAFF TELEPHONE SYSTEM OUTLET
$\triangledown_W$	WALL-MOUNTED INTERCOM STAFF TELEPHONE SYSTEM OUTLET
	COMPUTER OUTLET (NUMBER DENOTES NUMBER OF JACKS, WHERE NO NUMBER IS SHOWN, PROVIDE TWO JACKS MINIMUM).
WIR / WAP	WIRELESS ACCESS POINT. PROVIDE TWO DATA DROPS IN CEILING OR ON WALL FOR EACH LOCATION INDICATED, FIELD COORDINATE TERMINATION/ PLATE TYPE WITH OWNER PROVIDED DEVICE REQUIREMENTS.
C	CAMERA DATA JACK ABOVE THE CEILING. PROVIDE SINGLE DATA JACK FOR EACH LOCATION INDICATED.
	SMARTBOARD USB JACK
F	FIBER CONNECTION
	FLATSCREEN OR PROJECTOR INPUT JACK
	TELEVISION CABLE OUTLET
	BLANK PLATE
SB	SMARTBOARD
PP / P	PROJECTOR PLATE
	FLOOR OUTLET - DUPLEX RECEPTACLE, TELEPHONE AND COMPUTER JACK
	MOTOR
	DISCONNECT SWITCH (FUSED OR NON-FUSED AS INDICATED ON DRAWING)
	FRACTIONAL HORSEPOWER MANUAL MOTOR STARTER/DISCONNECT
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH
	MOTOR STARTER
	FRACTIONAL MOTOR STARTER
PP	POWER POLE
J	JUNCTION BOX
	PUSHBUTTON
	START/STOP STATION
	OVERHEAD DOOR OPERATOR (UP, DOWN AND STOP)
	WIRING CONCEALED ABOVE CEILING OR IN WALL, CROSS LINES INDICATE NUMBER OF #12 A.W.G. WIRES IN A 3/4" CONDUIT. GROUND WIRES ARE NOT SHOWN. NO CROSS LINES INDICATE (2)#12 A.W.G., (1)#12 A.W.G. GROUND IN A 3/4" CONDUIT.
	WIRING CONCEALED BELOW GRADE OR FLOOR
	CIRCUIT HOME RUN WITH CIRCUIT NUMBER INDICATED
	NORMAL-EMERGENCY OR EMERGENCY ONLY BRANCH CIRCUIT WIRING
	PLUGMOLD

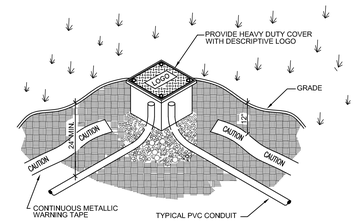
	EXIT SIGN
	EMERGENCY BATTERY UNIT
	REMOTE HEAD
	DOUBLE REMOTE HEAD
F	FIRE ALARM PULL STATION
F #	FIRE ALARM AUDIOVISUAL-HORN ALARM DEVICE. # INDICATES CANDELA RATING. WHERE NO NUMBER IS INDICATED, PROVIDE DEVICE WITH 15 CANDELA RATING.
VO F #	FIRE ALARM VISUAL-ONLY ALARM DEVICE. # INDICATES CANDELA RATING. WHERE NO NUMBER IS INDICATED, PROVIDE DEVICE WITH 15 CANDELA RATING.
	FIRE ALARM BELL
	SMOKE DETECTOR
H	HEAT DETECTOR
D	DUCT SMOKE DETECTOR
FS	SPRINKLER SYSTEM FLOW SWITCH (BY OTHERS)
TS	SPRINKLER SYSTEM TAMPER SWITCH (BY OTHERS)
PS	SPRINKLER SYSTEM PRESSURE SWITCH (BY OTHERS)
RAC	RESCUE ASSISTANCE REMOTE CALL STATION
RAM	RESCUE ASSISTANCE MASTER STATION/ANNUNCIATOR PANEL
	SPRINKLER SYSTEM ELECTRIC MOTOR GONG
D	DOORBELL
	MAGNETIC DOOR HOLD-OPEN DEVICE - FIRE ALARM SYSTEM
IAM	INDIVIDUAL ADDRESSABLE MODULE - FIRE ALARM SYSTEM
ZAM	ZONE ADDRESSABLE MODULE - FIRE ALARM SYSTEM
CFAM	CONTROL RELAY ZONE ADDRESSABLE MODULE - F/A SYSTEM
REX	REQUEST-TO-EXIT DETECTOR
	CLOCK, SPEAKER UNIT
C	WALL MOUNTED CLOCK
2 C	DOUBLE FACE CLOCK
CR	CORD REEL WITH 20A 120V OUTLET
$\oplus_E$ C_E	EXISTING DEVICES TO REMAIN
M	MICROPHONE JACK - SOUND SYSTEM
P	PROJECTOR INPUT JACK - SOUND SYSTEM
S	PUBLIC ADDRESS/INTERCOM SPEAKER (FLUSH, CEILING-MOUNTED)
	PUBLIC ADDRESS/INTERCOM SPEAKER (SURFACE, CEILING-MOUNTED)
S	PUBLIC ADDRESS/INTERCOM SPEAKER (SURFACE, WALL-MOUNTED)
S	PUBLIC ADDRESS/INTERCOM SPEAKER (FLUSH, WALL-MOUNTED)
V	PUBLIC ADDRESS/INTERCOM VOLUME CONTROL
OP	OCCUPANCY SENSOR CONTROL/ POWER PACK
OS	OCCUPANCY SENSOR (CEILING-MOUNTED)
DS	DAYLIGHT SENSOR (CEILING-MOUNTED)
OS	OCCUPANCY SENSOR (WALL-MOUNTED)
DUO	DUAL-TECH OCCUPANCY SENSOR (CORNER-MOUNTED)
OS	CORRIDOR OCCUPANCY SENSOR
US	ULTRASONIC 360° OCCUPANCY SENSOR (CEILING-MOUNTED)
	MOTION DETECTOR - SECURITY SYSTEM
	CEILING MOUNTED, 360° MOTION DETECTOR
	SECURITY CAMERA
■	DOOR MAGNET CONTACT - SECURITY SYSTEM
ML	MAGNETIC LOCK
S	ALARM HORN - SECURITY SYSTEM
*DS / ES	ELECTRIC DOOR STRIKE
CR	CARD READER
K	KEY PAD
	RESET KEYSWITCH STATION
HP	PUSH PLATE
	EMERGENCY OFF PUSH-BUTTON
	GAS SOLENOID VALVE
N	NURSE CALL STATION
E	EMERGENCY CALL STATION
	NURSE CALL DOME LIGHT
T	TRANSFORMER

APPLICABLE CODES (NJ)

LISTED BELOW ARE THE CURRENT ADOPTED CODES UNDER THE NEW JERSEY STATE UNIFORM CONSTRUCTION CODE (U.C.C.):

INTERNATIONAL BUILDING CODE- NEW JERSEY EDITION	2021
INTERNATIONAL MECHANICAL CODE	2021
ASHRAE 90.1	2019
THE NATIONAL ELECTRICAL CODE	2020
THE NATIONAL STANDARD PLUMBING CODE	2021
INTERNATIONAL FUEL GAS SUBCODE	2021
BARRIER FREE SUBCODE ICC/ANSI A117.1	2017
NJ REHABILITATION SUBCODE	NJAC 5:23-6
NJ BARRIER FREE SUBCODE	NJAC 5:23-7

ANY WORK WHICH DEVIATES FROM SUCH STANDARDS SHALL BE RECTIFIED TO THE SATISFACTION OF THE GOVERNING AUTHORITY. THE REQUIREMENTS OF GOVERNING AUTHORITIES SHALL SUPERSEDE THE DRAWINGS AND SPECIFICATIONS IN ALL CASES. THE ENGINEER SHALL BE NOTIFIED BY WRITTEN CHANGE ORDER BEFORE SUCH WORK IS STARTED. NON-FAMILIARITY WITH GOVERNING RULES AND REGULATIONS SHALL NOT BE CAUSE FOR AN EXTRA CHARGE IN THE EVENT THAT WORK MUST BE REPLACED FOR NONCOMPLIANCE.

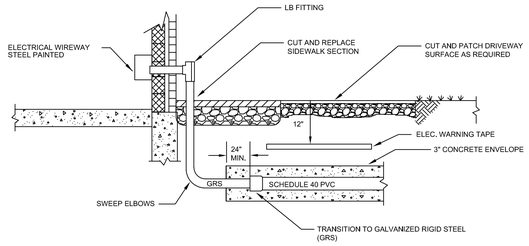


NOTES:

1. PROVIDE HANDHOLE ENCLOSURE. SIZES BASED ON NEC ARTICLE 314.30.
2. ALL HANDHOLES SHALL BE RATED AND HAVE COVERS RATED FOR UL TIER 10 IN LOCATIONS SUBJECT TO VEHICULAR TRAFFIC. DELIBERATE OR INCIDENTAL (PARKING, ROADWAY, DRIVES, SIDEWALKS WIDER THAN 5'-0", AND ALL LOCATIONS WITHIN 10'-0" OF THESE AREAS)
3. PROVIDE UL LISTED WET LOCATION SPLICE KITS FOR ALL SPLICES.

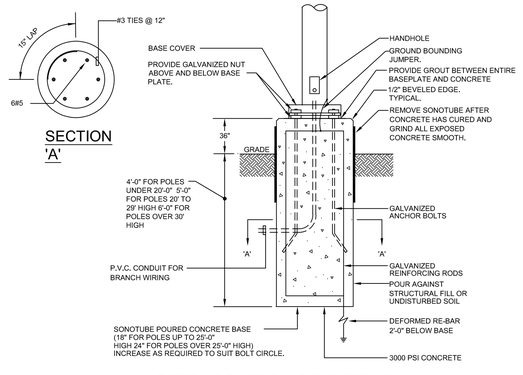
SPLICE BOX / PULL BOX DETAIL

NO SCALE



WALL PENETRATION DETAIL

NO SCALE



SITE LIGHT BASE DETAIL

NO SCALE

GENERAL ELECTRICAL DEMOLITION NOTES

1. IT IS THE INTENT OF THESE DOCUMENTS THAT ALL EXISTING ELECTRICAL EQUIPMENT AND SYSTEMS THAT ARE NOT TO BE REUSED BE DISCONNECTED AND REMOVED IN THEIR ENTIRETY. ALL FIXTURES, DEVICES, AND EQUIPMENT THAT ARE NO LONGER REQUIRED, WHETHER INDICATED ON THESE DRAWINGS OR NOT, SHALL BE REMOVED UNLESS NOTED OTHERWISE.
2. REMOVE ALL EXISTING WORK NECESSARY TO ACCOMMODATE ALL NEW WORK. REFER TO ALL OTHER DRAWINGS AND SPECIFICATIONS AND PHYSICALLY INSPECT THE EXISTING CONDITIONS TO ASCERTAIN THE MAGNITUDE OF THE WORK REQUIRED. EXISTING WORK WHICH IS TO REMAIN IN SERVICE, BUT WHICH INTERFERES WITH THE NEW WORK, SHALL BE RELOCATED AND RECONNECTED USING MATERIALS AND STANDARDS OF THIS SPECIFICATION.
3. REMOVE ALL EXPOSED CONDUIT, HANGERS, EQUIPMENT, FIXTURES, MATERIAL, ETC, NO LONGER REQUIRED TO REMAIN IN SERVICE TO A POINT BEHIND FINISHED WALLS, FLOORS AND CEILINGS, CAP OR PLUG AS REQUIRED TO MAKE A SAFE AND OPERABLE REMAINING SYSTEM. CLOSE AND RESTORE ALL WALL, FLOOR AND CEILING OPENINGS CREATED BY REMOVALS. RESTORATION SHALL BE SUITABLE FOR APPLICATION OF ARCHITECTURAL FINISHES TO MATCH EXISTING CONDITIONS. REMOVE CABLES AND WIRES THAT ARE NO LONGER ACTIVE.
4. IN THE EVENT ANY ITEM OR SYSTEM TO BE REMOVED OR RELOCATED, AS INDICATED ON THE DRAWINGS OR AS NECESSITATED BY ALTERATION OR NEW CONSTRUCTION IS IN ACTIVE USE, PROVIDE TEMPORARY FACILITIES AS REQUIRED TO MAINTAIN SUCH USE UNTIL THE PERMANENT INSTALLATION IS COMPLETED.
5. PROVIDE FOR REROUTING WORK IN EXISTING WALLS, FLOORS AND CEILINGS WHICH WILL BE DISTURBED OR WHICH WILL REQUIRE RELOCATION TO ACCOMMODATE THE NEW WORK OR ALTERATION.
6. ELECTRICAL DEMOLITION AND NEW WORK SHALL BE COORDINATED WITH ARCHITECTURAL AND SITE/CIVIL DEMOLITION DRAWINGS AND NOTES.
7. INFORMATION SHOWN IS BASED ON A SURVEY OF EXISTING BUILDING CONDITIONS. WHILE ALL ATTEMPTS AT ACCURACY HAVE BEEN TAKEN, NO GUARANTEE OF AN EXACT REPRESENTATION OR COMPLETENESS IS IMPLIED. RESPONSIBILITY FOR FINAL VERIFICATION FALLS TO THE CONTRACTOR. ANY UNRESOLVED DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
8. THE CONTRACTOR SHALL VERIFY VOLTAGE, NUMBER OF PHASES, AND WIRING ON ALL EQUIPMENT BEING RELOCATED OR REMOVED FOR RELOCATION.
9. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER THE TURNOVER OF ELECTRICAL EQUIPMENT AND MATERIAL BEFORE DEMOLITION IN ALL SPACES SHOWN. ALL UNUSED MATERIALS AND EQUIPMENT ARE THE PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER. OWNER RESERVES THE RIGHT TO RETAIN ANY MATERIAL, WHICH SHALL BE STORED AT HIS DIRECTION. ALL OTHER MATERIALS AND EQUIPMENT SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR.
10. ELECTRICAL WORK SHALL INCLUDE ALL REQUIRED CUTTING, PATCHING AND THE FULL RESTORATION OF WALL AND FLOOR STRUCTURE AND SURFACES. ALL EQUIPMENT, WALLS, FLOORS, ETC., DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER, AT THE CONTRACTOR'S EXPENSE.
11. ALL SYSTEMS TO REMAIN THAT ARE DAMAGED DURING DEMOLITION PHASE OF WORK SHALL BE RESTORED TO ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER. PROTECT ALL EXISTING WORK TO REMAIN IN AREAS WHERE CONSTRUCTION/DEMOLITION ACTIVITIES TAKE PLACE. SPECIAL PROTECTION SHALL BE PROVIDED FOR ALL WORK SENSITIVE TO DUST, INCLUDING BUT NOT LIMITED TO FIRE ALARM DEVICES.
12. MAINTAIN SYSTEMS PASSING THROUGH THE CONSTRUCTION SITE THAT ARE SERVING EXISTING FACILITIES THROUGHOUT PHASED CONSTRUCTION.

ELECTRICAL GENERAL NOTES

1. UNLESS OTHERWISE INDICATED, WIRE SIZES SHALL BE AS FOLLOWS: 20A #12, 30A #10, 40A #8, 50A #6, 70A #4, 100A #1.
2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE, CONDITIONS, AND CLEARANCES
3. SECURE ALL SUPPORTS TO BUILDING STRUCTURE AS SPECIFIED UNDER RACEWAYS. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10 FEED APART, RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
4. PASS RACEWAYS OVER WATER, STEAM, OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY SHALL BE WITHIN 3 INCHES OF STEAM OR HOT WATER PIPES, OR APPLIANCES, EXCEPT CROSSINGS WHERE RACEWAY SHALL BE AT LEAST 1 INCH FROM PIPE COVER.
5. CUT CONDUIT ENDS SQUARE, REAM SMOOTH. PAINT MALE THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAYS COUPLINGS.
6. HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS NOT PERMITTED. DO NOT RUN CONDUIT IN PRECAST ROOF SLABS, IN 2 INCH SLAB, OR IN TERRAZZO FLOOR FINISH.
7. LEAVE WIRE SUFFICIENTLY LONG TO PERMIT MAKING FINAL CONNECTION. IN RACEWAYS OVER 10 FEET IN WHICH WIRING IS NOT INSTALLED, FURNISH FISH WIRE.
8. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG, F (0 DEG, C), PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
9. SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.
10. LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS.
11. JUNCTION AND PULL BOXES: LOCATE GENERALLY NOT EXPOSED IN FINISHED SPACES, WHERE NECESSARY, RE-ROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE AND COORDINATE LOCATIONS WITH OTHER TRADES, COVERS OF JUNCTION AND PULL BOXES SHALL BE ACCESSIBLE.
12. SUPPORT PANEL, JUNCTION, AND PULL BOXES INDEPENDENTLY TO BUILDING STRUCTURE.
13. GROUND ALL ELECTRIC WORK IN ACCORDANCE WITH THE ELECTRICAL GROUNDING REQUIREMENTS OF NEC AND NJUCC.
14. PROVIDE SEPARATE GROUNDING CONDUCTOR FOR EACH NEW FEEDER AND BRANCH CIRCUIT.
15. ALL FEEDERS SHALL BE PROVIDED BASED ON FEEDER CIRCUIT BREAKER TRIP RATING. PER NEC UNLESS NOTED OTHERWISE, EACH CONDUIT SHALL INCLUDE FULL SIZE NEUTRAL AND GROUNDING CABLE.
16. ALLOWABLE AMPACITY OF CONDUCTORS INSTALLED IN INTERIOR AND BELOW GRADE LOCATIONS SHALL BE THOSE INDICATED IN THE 167°F (75°C) COLUMN OF TABLE 310.16 OF THE NATIONAL ELECTRICAL CODE (NFPA 70).
17. CONTRACTOR SHALL PROVIDE QUANTITY AND TYPE OF PULLBOXES/JUNCTION BOXES AS REQUIRED BY NEC AND MANUFACTURER'S CABLE PULLING REQUIREMENTS FOR PULLING AND/OR UTILITY COMPANY TENSIONS AND SIDEWALL PRESSURES.
18. THE ELECTRICAL CONTRACTOR SHALL TRACE AFFECTED SWITCHBOARD AND PANELBOARD BRANCH CIRCUITS IN CONTRACT AREAS TO DETERMINE WIRING CONFIGURATION OF AFFECTED AND SURROUNDING AREAS. ELECTRICAL CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS TO AID IN REWIRING CONTRACT AREAS IN COMPLIANCE WITH ENGINEERING DOCUMENTS, LOCAL CODES, AND ORDINANCES. PROVIDE FINDINGS IN REPORT FORM WITH MARKED UP DRAWINGS TO THE ENGINEER AS SOON AS COMPLETED. PROVIDE ELECTRICAL POWER RISER DIAGRAM SHOWING ALL EXISTING SWITCHBOARDS, PANELBOARDS AND LOAD CENTERS AND ASSOCIATED FEEDERS. NO WORK SHALL BEGIN UNTIL THIS STEP IS COMPLETED.
19. THE ELECTRICAL CONTRACTOR SHALL MEASURE THE STEADY STATE LOAD CURRENT AT EACH AFFECTED SWITCHBOARD AND PANELBOARD FEEDER AND DOCUMENT PRE-CONSTRUCTION VALUES FOR EXISTING LIGHTING AND MECHANICAL LOADS TO UNDERSTAND AVAILABILITY OF ADDITIONAL PANELBOARD LOADING WITHIN THE CONSTRAINTS OF THE STATE BUILDING AND ELECTRICAL CODES. PROVIDE FINDINGS IN REPORT FORM WITH MARKED UP DRAWINGS, TO THE ENGINEER AS SOON AS COMPLETED, NO REWIRING SHALL BEGIN UNTIL THIS STEP IS COMPLETED.
20. AT COMPLETION OF ALL BRANCH WIRING DESCRIBED ON CONTRACT DOCUMENTS, ELECTRICAL CONTRACTOR SHALL COMPILE A LIST OF EXISTING AND NEW CIRCUITS TO PROVIDE A FULL PANEL SCHEDULE DIRECTORY WITH DEVICE NAME (LIGHTING, RECEPTACLES, EQUIPMENT, ETC.) AND EQUIPMENT BEING SERVED. LABEL ALL CIRCUIT BREAKERS NOT BEING USED AS SPARE AND REMOVE UNUSED CONDUCTORS FROM PANELBOARD AND CONDUITS.

POWER WIRE/CABLE INSTALLATION SCHEDULE

SERVICE	TYPE	LOCATION	RACEWAY	FITTINGS
FEEDERS FOR DISTRIBUTION EQUIPMENT	ALL	ABOVE GRADE	ELECTRICAL METALLIC TUBING	STEEL COMPRESSION
FEEDERS FOR DISTRIBUTION EQUIPMENT	ALL	BELOW GRADE	RIGID GALVANIZED STEEL	GALVANIZED RIGID STEEL COUPLINGS
FEEDERS FOR MOTORS	5 HP AND ABOVE	ABOVE GRADE	ELECTRICAL METALLIC TUBING	STEEL COMPRESSION
FEEDERS FOR MOTORS	5 HP AND ABOVE	BELOW GRADE	RIGID GALVANIZED STEEL	GALVANIZED RIGID STEEL COUPLINGS
FEEDERS FOR MOTORS	3 HP AND BELOW	ABOVE GRADE	ELECTRICAL METALLIC TUBING	STEEL COMPRESSION
FEEDERS FOR MOTORS	3 HP AND BELOW	BELOW GRADE	RIGID GALVANIZED STEEL	GALVANIZED RIGID STEEL COUPLINGS
BRANCH CIRCUITS	ALL	ABOVE GRADE UNFINISHED AREAS	ELECTRICAL METALLIC TUBING	STEEL COMPRESSION
BRANCH CIRCUITS	ALL	BELOW GRADE	ELECTRICAL METALLIC TUBING	RAINTIGHT STEEL COMPRESSION
BRANCH CIRCUITS	ALL	MASONRY WALLS ABOVE GRADE FINISHED AREAS	SURFACE METAL RACEWAY	SURFACE METAL RACEWAY
BRANCH CIRCUITS	ALL	STUD WALLS ABOVE GRADE FINISHED AREAS	METAL CLAD CABLE	METAL CLAD CABLE
BRANCH CIRCUITS	ALL	PLENUM CEILINGS	ELECTRICAL METALLIC TUBING	STEEL COMPRESSION
BRANCH CIRCUITS	ALL	NON-PLENUM CEILINGS	METAL CLAD CABLE	METAL CLAD CABLE

NOTES: 1. PROVIDE RACEWAY TYPES AS SHOWN ON PLANS AND DETAILS WHERE IN CONFLICT WITH THIS SCHEDULE AND/OR SPECIFICATIONS.
2. ALL RACEWAYS/CABLE/WIRE SHALL BE INSTALLED CONCEALED EXCEPT IN UNFINISHED AREA SUCH AS MECHANICAL ROOMS, MDF'S AND IDF'S.
3. USE MATCHING MATERIALS FOR THOSE EXISTING RACEWAYS THAT ARE TO BE EXTENDED/ MODIFIED UNLESS NOTED OTHERWISE.

CODE REVIEW:

spiezle

SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

SIGNATURE:

THOMAS S. PERRINO	21AI01505400
SCOTT E. DOWNIE	21AI01674400
STEVEN LEONE	21AI01170100
STEVEN G. SIEGEL	21AI01564200
ANGELO ALBERTO	21AI01046700
JOHN F. WRIGHT	21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC.	21AC00063000
STEVEN LANGAN, PE	24GE04346700

SEAL:

CONSULTANTS:

PROJECT:
PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL
601 ERNSTON ROAD
PARLIN, NJ 08859

FOR

SAYREVILLE PUBLIC SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW: -

REVISIONS:

	REVISION	DATE
1	NAME	

FOR BID:

DRAWING TITLE:
ELECTRICAL COVER SHEET

COMMISSION NUMBER:
25K011

DO NOT SCALE THE DRAWINGS

DRAWING NUMBER:
SE0.0

THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"X42"

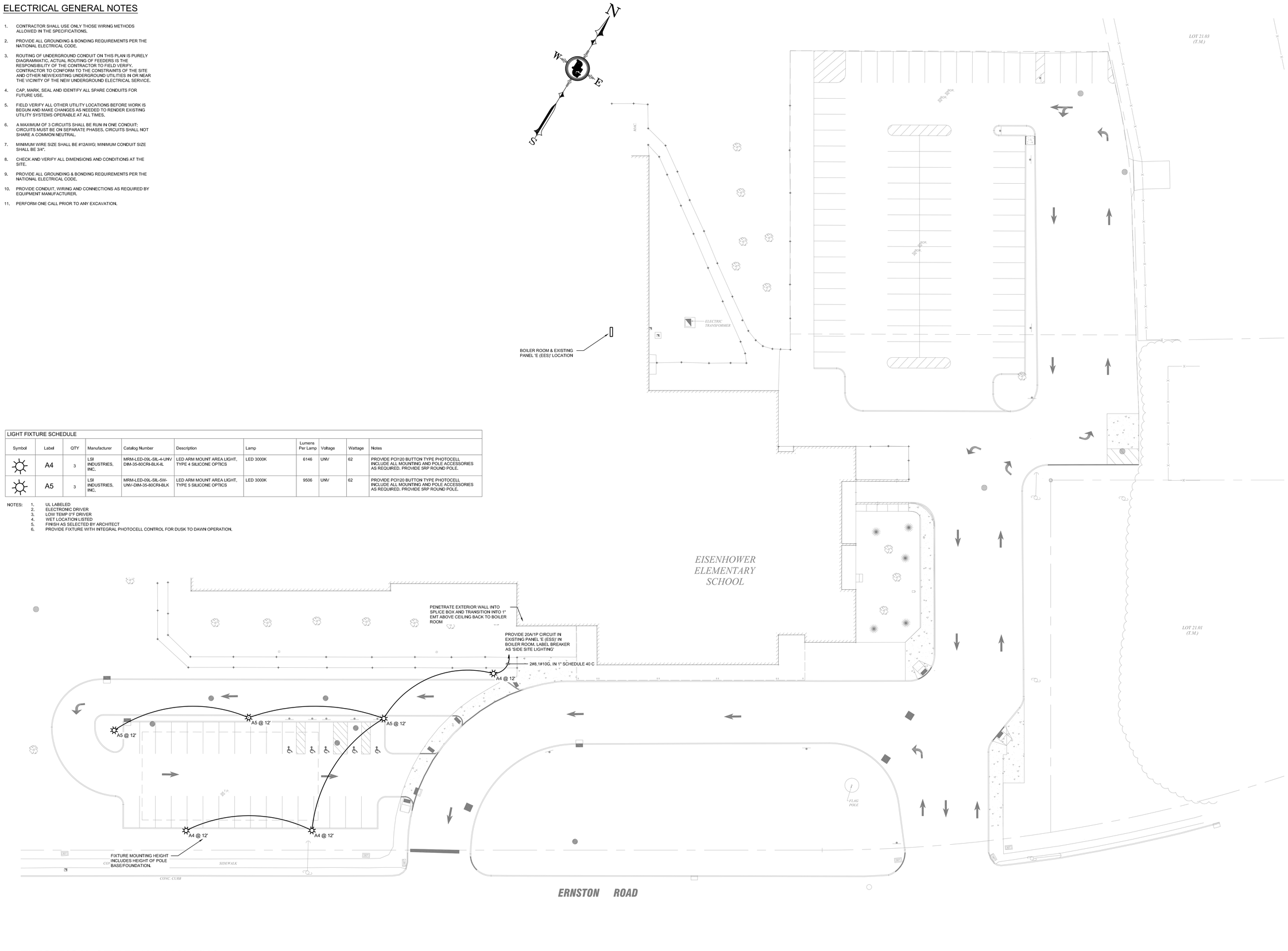
ELECTRICAL GENERAL NOTES

1. CONTRACTOR SHALL USE ONLY THOSE WIRING METHODS ALLOWED IN THE SPECIFICATIONS.
2. PROVIDE ALL GROUNDING & BONDING REQUIREMENTS PER THE NATIONAL ELECTRICAL CODE.
3. ROUTING OF UNDERGROUND CONDUIT ON THIS PLAN IS PURELY DIAGRAMMATIC, ACTUAL ROUTING OF FEEDERS IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY. CONTRACTOR TO CONFORM TO THE CONSTRAINTS OF THE SITE AND OTHER NEW/EXISTING UNDERGROUND UTILITIES IN OR NEAR THE VICINITY OF THE NEW UNDERGROUND ELECTRICAL SERVICE.
4. CAP, MARK, SEAL AND IDENTIFY ALL SPARE CONDUITS FOR FUTURE USE.
5. FIELD VERIFY ALL OTHER UTILITY LOCATIONS BEFORE WORK IS BEGUN AND MAKE CHANGES AS NEEDED TO RENDER EXISTING UTILITY SYSTEMS OPERABLE AT ALL TIMES.
6. A MAXIMUM OF 3 CIRCUITS SHALL BE RUN IN ONE CONDUIT; CIRCUITS MUST BE ON SEPARATE PHASES. CIRCUITS SHALL NOT SHARE A COMMON NEUTRAL.
7. MINIMUM WIRE SIZE SHALL BE #12AWG; MINIMUM CONDUIT SIZE SHALL BE 3/4".
8. CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE.
9. PROVIDE ALL GROUNDING & BONDING REQUIREMENTS PER THE NATIONAL ELECTRICAL CODE.
10. PROVIDE CONDUIT, WIRING AND CONNECTIONS AS REQUIRED BY EQUIPMENT MANUFACTURER.
11. PERFORM ONE CALL PRIOR TO ANY EXCAVATION.

LIGHT FIXTURE SCHEDULE

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Lumens Per Lamp	Voltage	Wattage	Notes
☼	A4	3	LSI INDUSTRIES, INC.	MRM-LED-09L-SIL-4-UNV DIM-35-80CRI-BLK-IL	LED ARM MOUNT AREA LIGHT, TYPE 4 SILICONE OPTICS	LED 3000K	6146	UNV	62	PROVIDE PCI120 BUTTON TYPE PHOTOCELL INCLUDE ALL MOUNTING AND POLE ACCESSORIES AS REQUIRED. PROVIDE SRP ROUND POLE.
☼	A5	3	LSI INDUSTRIES, INC.	MRM-LED-09L-SIL-5W-UNV-DIM-35-80CRI-BLK	LED ARM MOUNT AREA LIGHT, TYPE 5 SILICONE OPTICS	LED 3000K	9506	UNV	62	PROVIDE PCI120 BUTTON TYPE PHOTOCELL INCLUDE ALL MOUNTING AND POLE ACCESSORIES AS REQUIRED. PROVIDE SRP ROUND POLE.

NOTES:
1. UL LABELED
2. ELECTRONIC DRIVER
3. LOW TEMP 0°F DRIVER
4. WET LOCATION LISTED
5. FINISH AS SELECTED BY ARCHITECT
6. PROVIDE FIXTURE WITH INTEGRAL PHOTOCELL CONTROL FOR DUSK TO DAWN OPERATION.



ELECTRICAL SITE PLAN - LIGHTING

20' 10' 0 20' 40' 60'
SCALE: 1"=20'

CODE REVIEW:

spiezle
SPIEZLE ARCHITECTURAL GROUP INC.
1395 YARDVILLE HAMILTON SQUARE ROAD
SUITE 2A
HAMILTON, NJ 08691
PHONE: 609-695-7400

SIGNATURE:

THOMAS S. PERRINO	21AI01505400
SCOTT E. DOWNE	21AI01674400
STEVEN LEONE	21AI01775100
STEVEN G. SIEGEL	21AI01564200
ANGELO ALBERTO	21AI01945700
JOHN F. WRIGHT	21AI01784200
SPIEZLE ARCHITECTURAL GROUP, INC.	21AC00083000
STEVEN LANGAN, PE	24GE04346700

SEAL:

CONSULTANTS:

BID ISSUE - 5/12/25

PROJECT:
PARKING LOT EXPANSION AT EISENHOWER ELEMENTARY SCHOOL
601 ERNSTON ROAD
PARLIN, NJ 08859
FOR
SAYREVILLE PUBLIC SCHOOLS
298 ERNSTON ROAD, PARLIN, NJ 08859

FOR CODE REVIEW: -

REVISIONS:

	REVISION NAME	DATE

FOR BID: MAY 12, 2025

DRAWING TITLE:
ELECTRICAL SITE PLAN

COMMISSION NUMBER:
25K011

DO NOT SCALE THE DRAWINGS

DRAWING NUMBER:
SE1.0

THIS DRAWING IS FORMATTED TO BE PRINTED AT 30"x42"

5/7/2025 3:19:57 PM
Autodesk Docs://25K011 - Sayreville - Eisenhower Parking Lot/25K011 - Sayreville EES Parking Expansion.rvt