McGill ASSOCIATES

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4504	2/11/13	18446

February 11, 2013

Mr. Larry Frost
Solid Waste Permitting Section
Division of Waste Management
North Carolina Department of Environment and Natural Resources
2090 U.S. Highway 70
Swannanoa, North Carolina 28778

RE: Record Drawings
Capital Improvements Project
Stoney Mountain Road Landfill
Henderson County, North Carolina
Permit # 45-04-T

Dear Mr. Frost:

On behalf of Henderson County, McGill Associates is pleased to submit to the North Carolina Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section the Record Drawings for the Capital Improvements Project at the Stoney Mountain Road Landfill. The Submission of the Record Drawings is the final requirement for the completion of this project. The Professional Engineer's Certification for this project was submitted to the Solid Waste Section by Mr. Ben Cathey, PE, Construction Services Manager for McGill Associates, in April 2012. This project generally consisted of the construction of new scales, scalehouse, citizen's convenience center, various drop-off areas, access roads, and appurtenances. The project also included rehabilitation work at the transfer station. The following documents are provided for your review:

- Record Drawings, Stoney Mountain Road Landfill, Capital Improvements Project, Henderson County, North Carolina, Permit # 45-04T, Dated January 28, 2013, One (1) complete Set.

- Digital Version, Record Drawings, Stoney Mountain Road Landfill, Capital Improvements Project, Henderson County, North Carolina, Permit # 45-04T, Dated January 28, 2013.

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Engineering • Planning • Environmental
McGill Associates, P.A. • P.O. Box 2259, Asheville, NC 28802 • 55 Broad Street, Asheville, NC 28801
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McGill Associates and Henderson County appreciate your assistance with this project during the construction process and we all look forward to enjoying the benefits of the upgraded facility. Please do not hesitate to contact us if you any questions or require additional information.

Sincerely,
McGILL ASSOCIATES, P.A.

WILLIAM H. SPERRY, PE
Project Manager

Enclosures

cc: Steve Wyatt, Henderson County Manager, w/o Enclosures
Marcus Jones, PE, Henderson County Director of Engineering, w/Enclosures
Natalie Berry, PE, Assistant Henderson County Engineer, w/o Enclosures
Greg Wiggins, Utilities Manager, Henderson County, w/o Enclosures
Mr. Mark Cathey, PE, McGill Associates, w/o Enclosures
Mr. Ben Cathey, PE, McGill Associates, w/o Enclosures

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STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS
HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

County Manager: Steve Wyatt
County Engineer: Marcus Jones, PE

McGill ASSOCIATES
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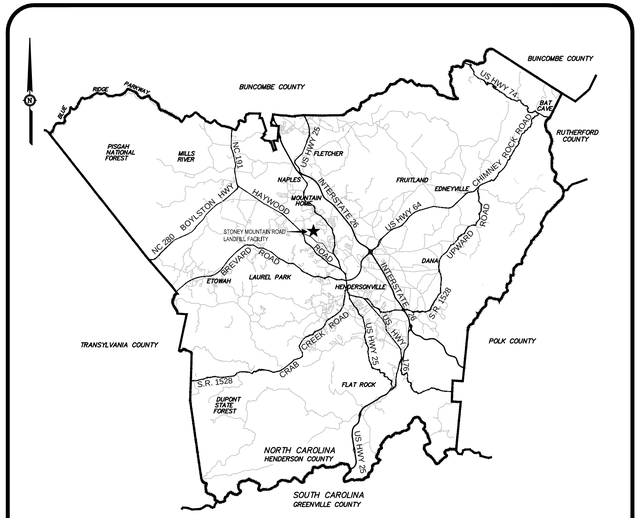

VICINITY MAP NOT TO SCALE

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034439 ENGINEER BRENT T. CATHEY

SCHEDULE OF DRAWINGS

CIVIL DRAWINGS

G-001 . . . . . COVER SHEET

G-002 . . . . . GENERAL NOTES AND LEGENDS

CIVIL DRAWINGS
C-101 . . . . . OVERALL SITE PLAN

CD-102 . . . . SCALE AREA CAP RECONSTRUCTION

C-102 . . . . . SCALE AREA SITE PLAN

C-103 . . . . . SCALE AREA GRADING, DRAINAGE & EROSION CONTROL PLAN

C-104 . . . . . SCALE HOUSE SITE PLAN

C-105 . . . . . MSW / RECYCLING DROP-OFF AREA GRADING, DRAINAGE & EROSION CONTROL PLAN

C-106 . . . . . CONVENIENCE CENTER ACCESS ROAD PLAN - STA 10+00 THRU STA 19+00

C-107 . . . . . CONVENIENCE CENTER ACCESS ROAD PLAN - STA 19+00 THRU STA 26+03.67

C-108 . . . . . CONVENIENCE CENTER SITE PLAN

C-109 . . . . . CONVENIENCE CENTER ACCESS ROAD PROFILE

C-110 . . . . . COMPOSTING & WHITE GOODS PLAN

C-111 . . . . . SIGNAGE PLAN

C-501 . . . . . MISCELLANEOUS DETAILS

C-502 . . . . . MISCELLANEOUS DETAILS

C-503 . . . . . MISCELLANEOUS DETAILS

C-504 . . . . . MISCELLANEOUS DETAILS

C-505 . . . . . MISCELLANEOUS DETAILS

C-506 . . . . . MISCELLANEOUS DETAILS

C-507 . . . . . MISCELLANEOUS DETAILS

C-508 . . . . . MISCELLANEOUS DETAILS

C-509 . . . . . MISCELLANEOUS DETAILS

C-510 . . . . . MISCELLANEOUS DETAILS

E-001 . . . . . ELECTRICAL LEGEND, NOTES, SCHEDULES, AND ABBREVIATONS

E-102 . . . . . ELECTRICAL OVERALL SITE PLAN

E-103 . . . . . SCALE HOUSE ELECTRICAL SITE PLAN

E-104 . . . . . CONVENIENCE CENTER ELECTRICAL SITE PLAN

E-501 . . . . . ELECTRICAL DETAILS

E-601 . . . . . SCHEDULES AND DIAGRAMS

STRUCTURAL DRAWINGS
S1.0 . . . . GENERAL NOTES AND TYPICAL DETAILS

S1.1 . . . . TYPICAL DETAILS

S2 . . . . . SCALE HOUSE FOUNDATION PLAN & DETAILS

S3 . . . . . SCALE HOUSE ROOF FRAMING PLAN AND DETAILS

S4 . . . . . RECYCLING CENTER RETAINING WALL

S5 . . . . . CONVENIENCE CENTER RETAINING WALL

ARCHITECTURAL DRAWINGS

ARCHITECTURAL DRAWINGS
COVER SHEET

A1 . . . . . SCALE HOUSE FLOOR PLAN & ELEVATIONS

A2 . . . . . SCALE HOUSE FLOOR PLAN & ELEVATIONS

A3 . . . . . SCALE HOUSE FLOOR PLAN & ELEVATIONS

A4 . . . . . SCALE HOUSE FLOOR PLAN & ELEVATIONS

A5 . . . . . SCALE HOUSE FLOOR PLAN & ELEVATIONS

PLUMBING DRAWINGS
P101 . . . SCALE HOUSE FLOOR PLAN PLUMBING

P301 . . . BASIC PLUMBING REQUIREMENTS

MECHANICAL DRAWINGS
M101 . . . SCALE HOUSE FLOOR PLAN HVAC

M301 . . . BASIC HVAC REQUIREMENTS

ELECTRICAL DRAWINGS
E100 . . . SCALE HOUSE PARTIAL SITE PLAN ELECTRICAL

E101 . . . SCALE HOUSE FLOOR PLAN ELECTRICAL

E201 . . . SCALE HOUSE ELECTRICAL SCHEDULES & DETAILS

E301 . . . SCALE HOUSE ELECTRICAL SCHEDULES & DETAILS

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GENERAL NOTES

1. ALL CONSTRUCTION OUTSIDE RIGHTS-OF-WAY SHALL TAKE PLACE WITHIN THE PERMANENT AND TEMPORARY ACCESS EASEMENTS SHOWN.
2. CONTRACTOR SHALL REPAIR ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN THE ORIGINAL SITE, OR AS NOTED.
3. LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE ONLY. EXACT LOCATIONS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR. AT LEAST THREE DAYS PRIOR TO CONSTRUCTION, CONTRACTOR MUST NOTIFY EXISTING UTILITY OWNERS. CALL BEFORE YOU DIG. NORTH CAROLINA ONE CALL (1-800-632-4949).
4. ALL WORK NEAR AND AROUND WATERWAYS MUST CONFORM TO THE RULES OF THE STATE OF NORTH CAROLINA.
5. CONTRACTOR MUST PROVIDE EROSION CONTROL DEVICES TO CONTROL RUNOFF FROM THE CONSTRUCTION SITE. CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES THAT MAY BE LEVIED DUE TO POLLUTION CREATED DURING CONSTRUCTION.
6. CONTRACTOR SHALL FOLLOW ALL FEDERAL, STATE AND LOCAL HEALTH AND SAFETY REGULATIONS PERTAINING TO CONSTRUCTION OPERATIONS.
7. WATER LINES SHALL HAVE 3'-0" MINIMUM COVER UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
8. WATER AND STORM SEWER LINES SHALL HAVE A MINIMUM 12" VERTICAL SEPARATION.
9. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
10. LEGAL DESCRIPTIONS FOR PROPOSED EASEMENTS BY OTHERS.
11. CONTRACTOR SHALL NOTIFY THE PROPER LOCAL AUTHORITIES 24 HOURS PRIOR TO ANY ROAD BEING CLOSED FOR CONSTRUCTION, INCLUDING BUT NOT LIMITED TO LOCAL NEWSPAPER, RADIO STATION, FIRE DEPARTMENT, COUNTY SHERIFF'S DEPARTMENT, AMBULANCE, AND COUNTY EMERGENCY AGENCY. ALL TRAFFIC CONTROL SHALL CONFORM TO THE REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.
12. CONTRACTOR SHALL NOTIFY THE ENGINEER AFTER EXISTING BURIED UTILITIES HAVE BEEN LOCATED AND 24 HOURS PRIOR TO CONSTRUCTION.
13. ALL FENCE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH LIKE MATERIALS IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH STANDARD FENCE CONSTRUCTION PRACTICES AT THE CONTRACTOR'S EXPENSE.
14. CONTRACTOR SHALL FIELD LOCATE ALL BURIED TELEPHONE LINE IN CONFLICT WITH THE PROPOSED WATER LINE. WHERE NECESSARY, EXISTING BURIED TELEPHONE LINE SHALL BE TEMPORARILY MOVED DURING CONSTRUCTION OF THE PROPOSED WATER LINE AND RE-LAID AT NO ADDITIONAL COST TO THE OWNER.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS DURING CONSTRUCTION AND SHALL REPAIR ROADS PER REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION. NO OPEN CUTS OF EXISTING ROADS SHALL BE ALLOWED EXCEPT WHERE INDICATED ON THE DRAWINGS OR WHERE SPECIFIC PERMISSION IS GRANTED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION. SAND OR A SIMILAR MATERIAL APPROVED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SHALL BE PLACED ON THE ROAD TO AID IN THE CLEAN UP AFTER CONSTRUCTION. A MINIMUM OF 2" OF SAND SHALL BE PLACED ON THE ROAD PRIOR TO STOCKPILING SPOIL MATERIAL ON THE ROAD SURFACE TO FACILITATE CLEANUP.

SCALE AREA CONSTRUCTION SEQUENCE NOTES

1. NO GRADING, TEMPORARY OR PERMANENT PAST STREAM IMPACT LIMITS SHOWN. NO EROSION OR SEDIMENT PAST LIMITS SHOWN. ALL RIP RAP MUST TERMINATE AT LIMITS SHOWN.
2. INSTALL SILT FENCE. INSTALL TREE PROTECTION, AS APPLICABLE AND MONITORING WELL PROTECTION.
3. INSTALL UNDERDRAIN IN AREA OF STREAM IMPACT. INSTALL PIPES P15 AND P15A AND JUNCTION BOX S4, ALONG WITH ASSOCIATED RIPRAP, IN ORDER TO BY-PASS STORM WATER DISCHARGE FROM UNDISTURBED AREAS AROUND SEDIMENT BASIN 2.
4. BEGIN DEMOLITION WORK OF EXISTING INFRASTRUCTURE TO BE REMOVED.
5. ENSURE THAT ALL DISCHARGE FROM DISTURBED AREAS IS DIRECTED TO SEDIMENT CONTROL STRUCTURES.
6. BEGIN CAP RECONSTRUCTION WORK.

CONVENIENCE CENTER AREA CONSTRUCTION SEQUENCE NOTES

1. NO GRADING, TEMPORARY OR PERMANENT PAST STREAM IMPACT LIMITS SHOWN. NO EROSION OR SEDIMENT PAST LIMITS SHOWN. ALL RIP RAP MUST TERMINATE AT LIMITS SHOWN.
2. INSTALL PROTECTION AROUND MONITORING WELLS.
3. INSTALL SILT FENCE IN AREA OF STREAM IMPACT, NEAR PIPE P52. INSTALL P52 AND ASSOCIATED ENDWALLS AND RIPRAP.
4. INSTALL SEDIMENT TRAPS 4, 5, 6, & 7 NEAR PIPE P52. INSTALL SEDIMENT BASIN 4.
5. INSTALL STABILIZED CONSTRUCTION ENTRANCE NEAR STONEY MTN. ROAD. INSTALL SEDIMENT BASIN 3. BEGIN ACCESS ROAD GRADING WORK. INSTALL SEDIMENT BASIN 8 NEAR SOIL BORROW AREA PRIOR TO GRADING OPERATIONS IN THIS VICINITY.
6. AS GRADING PROCEEDS UP ACCESS ROAD TOWARDS CONVENIENCE CENTER, INSTALL SEDIMENT TRAPS 8 & 9. UTILIZE EXISTING SEDIMENT BASIN WEST OF C&D LANDFILL, AS LONG AS POSSIBLE, UNTIL READY TO PERFORM GRADING AT CONVENIENCE CENTER.
7. INSTALL SEDIMENT BASIN 5 JUST NORTH OF CONVENIENCE CENTER, PRIOR TO GRADING IN THIS VICINITY.
8. PRIOR TO GRADING WORK IN THE VICINITY OF THE WHITE GOODS PAD, MULCHING AREA, AND COMPOSTING AREA, INSTALL SEDIMENT BASINS 6 & 8.
9. FOLLOW EROSION CONTROL NOTES.

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GENERAL CONSTRUCTION NOTES

REVISION DATE - JUNE 16, 2009

1. FINISH GRADE TOLERANCES SHALL BE AS NOTED IN THE SPECIFICATIONS. THE ENGINEER MAY MAKE GRADE CHANGES AS REQUIRED IN THE FIELD WITHOUT EFFECTING THE UNIT BID PRICE FOR UNCLASSIFIED EXCAVATION.
2. UNLESS OTHERWISE STATED, ALL FILL AREAS SHALL BE CONSTRUCTED IN LAYERS OF 8" MAXIMUM THICKNESS, WITH WATER ADDED OR SOIL CONDITIONED TO THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE ENGINEER AND COMPACTED WITH A SHEEP'S FOOT ROLLER TO A COMPACTION EQUAL TO OR GREATER THAN 95% (100% IN THE TOP 2' OF THE SUB GRADE BELOW ROADWAYS AND PARKING LOTS) OF THE DENSITY OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH THE STANDARD PROCTOR METHOD OF MOISTURE-DENSITY RELATIONSHIP TEST, ASTM D698 OR AASHTO-99 UNLESS SPECIFIED IN OTHER SPECIFICATIONS.
3. ENTIRE AREA TO BE GRADED SHALL BE CLEARED AND GRUBBED. NO FILL SHALL BE PLACED ON ANY AREA NOT CLEARED AND GRUBBED.
4. ALL SOIL EROSION CONTROL MEASURES REQUIRED BY THE GRADING PLAN SHALL BE PERFORMED PRIOR TO GRADING, CLEARING OR GRUBBING. ALL EROSION CONTROL DEVICES SUCH AS SILT FENCES, ETC., SHALL BE MAINTAINED IN WORKABLE CONDITION FOR THE LIFE OF THE PROJECT AND SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT ONLY ON THE ENGINEER'S APPROVAL. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO CLEARING AND GRUBBING. IF DURING THE LIFE OF THE PROJECT, A STORM CAUSES SOIL EROSION WHICH CHANGES FINISH GRADES OR CREATES "GULLIES" AND "WASHED AREAS", THESE SHALL BE REPAIRED AT NO EXTRA COST, AND ALL SILT WASHED OFF OF THE PROJECT SITE ONTO ADJACENT PROPERTY SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AT NO EXTRA COST. THE CONTRACTOR SHALL ADHERE TO ANY APPROVED EROSION CONTROL PLANS WHETHER INDICATED IN THE CONSTRUCTION PLANS OR UNDER SEPARATE COVER.
5. DISPOSABLE MATERIAL
   - A. CLEARING AND GRUBBING WASTES SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE, UNLESS SPECIFIED OTHERWISE IN THE SPECIFICATIONS.
   - B. SOLID WASTES TO BE REMOVED, SUCH AS SIDEWALKS, CURBS, PAVEMENT, ETC., MAY BE PLACED IN SPECIFIC AREAS DELINEATED ON THE PLANS OR REMOVED FROM THE SITE AS REQUIRED BY THE SPECIFICATIONS.
   - C. ABANDONED UTILITIES SUCH AS CULVERTS, WATER PIPE, HYDRANTS, CASTINGS, PIPE APPURTENANCES, UTILITY POLES, ETC., SHALL BE THE PROPERTY OF THE SPECIFIC UTILITY AGENCY, OR COMPANY HAVING JURISDICTION. BEFORE THE CONTRACTOR CAN REMOVE, DESTROY, SALVAGE, REUSE, SELL OR STORE FOR HIS OWN USE ANY ABANDONED UTILITY, HE MUST PRESENT TO THE OWNER WRITTEN PERMISSION FROM THE UTILITY INVOLVED.
6. IN THE EVENT EXCESSIVE GROUNDWATER OR SPRINGS ARE ENCOUNTERED WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL NECESSARY UNDER DRAINS AND STONE AS DIRECTED BY THE ENGINEER. ALL WORK SHALL BE PAID BASED UPON UNIT BIDS, UNLESS SPECIFIED OTHERWISE.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ADJUSTMENT OF ALL UTILITY SURFACE ACCESSES WHETHER HE PERFORMS THE WORK OR A UTILITY COMPANY PERFORMS THE WORK.
8. THE CONTRACTOR SHALL CONTROL ALL "DUST" BY PERIODIC WATERING AND SHALL PROVIDE ACCESS AT ALL TIMES FOR PROPERTY OWNERS WITHIN THE PROJECT AREA AND FOR EMERGENCY VEHICLES. ALL OPEN DITCHES AND HAZARDOUS AREAS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATIONS.
9. ALL AREAS WHERE THERE IS EXPOSED DIRT SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADE AND SMOOTH, FREE OF ALL ROCKS LARGER THAN 3", EQUIPMENT TRACKS, DIRT CLODS, BUMPS, RIDGES AND GOUGES PRIOR TO SEEDING; THE SURFACE SHALL BE LOOSENED TO A DEPTH OF ±4"-6" TO ACCEPT SEED. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING OPERATIONS WITHOUT FIRST OBTAINING THE ENGINEER'S APPROVAL OF THE GRADED SURFACE. ALL SEEDING SHALL BE PERFORMED BY A MECHANICAL "HYDRO-SEEDER". HAND SEEDING SHALL BE AUTHORIZED ON AN AREA BY AREA APPROVAL BY THE ENGINEER. DISTURBED AREAS SHOULD THEN BE MATTED WITH SHORT-TERM PHOTODEGRADABLE EROSION CONTROL MATTING AS SHOWN ON THE DRAWINGS.
10. WHERE SPECIFIED, ALL CORRUGATED METAL STORM DRAIN PIPE (CMP) SHALL BE ALUMINIZED TYPE 2 CORRUGATED STEEL MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M-36. THE PIPE SHALL BE MANUFACTURED FROM ALUMINIZED STEEL TYPE 2 MATERIAL CONFORMING TO THE REQUIREMENTS OF AASHTO M-274. ALL PIPE SHALL BE FURNISHED WITH REROLLED ENDS AND SHALL BE JOINED WITH HUGGER BANDS. THE USE OF DIMPLE BANDS WILL NOT BE ALLOWED. PIPE THROUGH 24" DIAMETER SHALL BE 16 GAUGE, PIPE THROUGH 42" DIAMETER SHALL BE 14 GAUGE, PIPE THROUGH 54" DIAMETER SHALL BE 12 GAUGE. DIMPLE BANDS SHALL NOT BE USED.

    WHERE SPECIFIED, STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) CONFORMING TO AASHTO M-170, AS CONTAINED IN NCDOT STANDARD SPECIFICATION 1032-9 FOR WALL "B" TYPE.

    WHERE SPECIFIED, ALL STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE). SMOOTH WALL INTERIOR, WITH WATER TIGHT JOINTS, BACKFILLED WITH # 57 WASHED STONE UP TO MIN. 6" OVER THE TOP OF THE PIPE. HDPE PIPE USED FOR STORM DRAINAGE DETENTION SYSTEMS SHALL BE ADS N12 WT OR APPROVED EQUAL.
11. CONTRACTOR SHALL VERIFY ALL ELEVATIONS BEFORE INSTALLATION OF FACILITIES.
12. CATCH BASINS CAST-IN-PLACE SHALL CONFORM TO THE REQUIREMENTS OF NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (LATEST EDITION) ARTICLES 840-1 THROUGH 840-3. CURB INLET CATCH BASIN SHALL CONFORM TO NCDOT STANDARD DETAILS 840.02 THROUGH 840.04. DROP INLETS SHALL CONFORM TO STANDARD DETAIL 840.14. JUNCTION BOXES SHALL CONFORM TO STANDARD DETAIL 840.31.
13. CURB INLET FRAME, GRATE AND HOOD SHALL BE NEENAH R-3233D, PRODUCTS BY DEWEY BROS., U.S. FOUNDRY OR EQUAL. DROP INLET FRAME AND GRATE SHALL BE NEENAH R-3339A OR EQUAL. FIELD INLET COVER SHALL CONFORM TO NCDOT STANDARD DETAIL 840.04, OPENING FACING UPSTREAM.
14. CONCRETE AND MASONRY SHALL MEET THE REQUIREMENTS OF APPROPRIATE SECTION OF NCDOT STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES (LATEST EDITION). CONCRETE SHALL BE CLASS A OR B, 4000 PSI MINIMUM, MEETING THE REQUIREMENTS OF SECTION 1000, CONSTRUCTED IN ACCORDANCE WITH SECTION 825. MASONRY SHALL MEET THE REQUIREMENTS OF SECTION 1040, CONSTRUCTED IN ACCORDANCE WITH SECTION 830 AND/OR 834.
15. TOPS OF PROPOSED FRAMES AND GRATES SHALL BE FLUSH WITH FINISHED GRADE.
16. PRE CAST CONCRETE BOXES ARE ACCEPTABLE ALTERNATIVES FOR PROPOSED CATCH BASINS.

NORTH CAROLINA LAND QUALITY SECTION

EROSION CONTROL NOTES

REVISION DATE - NOVEMBER 24, 2008

GENERAL: ALL EROSION CONTROL MEASURES ARE TO BE PERFORMED IN STRICT ACCORDANCE WITH REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION. THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE COMPLIED WITH FOR ALL WORK.

1. – PRIOR TO BEGINNING WORK ON THE PROJECT THE CONTRACTOR SHALL OBTAIN FROM THE OWNER A COPY OF THE "EROSION AND SEDIMENT CONTROL APPROVAL" FROM THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND QUALITY, OR THE LOCAL AUTHORIZED PROGRAM. THE APPROVAL NOTICE MUST BE AVAILABLE ON-SITE DURING ALL GRADING AND CONSTRUCTION ACTIVITIES.

2. – INSTALL ALL EROSION CONTROL MEASURES AS REQUIRED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.

   NOTE: ALL UTILITY INSTALLATION WITHIN 25' OF A RIVER OR STREAM BANK SHALL BE INSTALLED PER ***STREAM PROTECTION DURING EXCAVATION*** DETAIL. SEEDING AND MULCHING SHALL BE COMPLETED DAILY IN AREAS NOTED AS STREAM PROTECTION AREAS. SILT FENCE IN THESE AREAS SHALL NOT BE INSTALLED CLOSER THAN 5' FROM CREEK BANK UNLESS FIELD CONDITIONS PREVENT SUFFICIENT CLEARANCE. ALL SILT FENCES SHALL BE INSPECTED AND CLEANED AS NEEDED AFTER EACH RAIN.

3. – NO WORK SHALL BE PERFORMED IN STREAM FROM OCTOBER 15 TO APRIL 15 (TO ACCOMMODATE COE AND DWQ RECOMMENDATIONS CONCERNING WORK IN TROUT WATERS).

4. – CONTRACTOR IS TO PLACE PERMANENT STAKES MARKING CLEARLY THE 25' BUFFER FOR STREAMS WHERE SHOWN ON THE PLANS AND THE MARKERS ARE TO BE VISIBLE AT ALL TIMES DURING CONSTRUCTION.

5. – OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY A REPRESENTATIVE OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.

6. – CONSTRUCTION SHALL BE LIMITED TO 2000' OF CONTIGUOUS ROAD CORRIDOR UNTIL ALL CUTS, FILLS, AND DITCHES ARE STABILIZED FOR THAT 2000' SECTION. UPON STABILIZATION OF THAT SECTION ANOTHER 2000' SECTION CAN BE CONSTRUCTED AND STABILIZED.

7. – ALL STREAM CROSSINGS AND PERENNIAL STREAMS WILL BE ALIGNED WITH THE NATURAL STREAM PATTERNS ABOVE AND BELOW THE PROPOSED ROAD. ARCH CULVERTS WILL BE USED AND FOOTERS WILL BE CONSTRUCTED IN UNDISTURBED BANKS AWAY FROM THE STREAM FLOW.

8. – PROCEED WITH GRADING, CLEARING AND GRUBBING. NOTE: NO OFF SITE DISPOSAL OF MATERIAL IS ALLOWED UNLESS THE DISPOSAL SITE HAS AN APPROVED EROSION CONTROL PLAN.

9. – SEED AND PLACE EROSION CONTROL MATTING ON ALL CUT AND FILL SLOPES THAT ARE NOT ROCK IMMEDIATELY UPON COMPLETION OF SLOPE STABILIZATION.

10. – ALL TEMPORARY STREAM AND CREEK CROSSINGS FOR EQUIPMENT DURING CONSTRUCTION SHALL BE MADE USING TEMPORARY BRIDGES. NO STREAM BANK OR STREAM BED DISTURBANCE SHALL BE ALLOWED FOR EQUIPMENT CROSSINGS.

11. – SEED AND MULCH DENUDED AREA WITHIN 15 DAYS AFTER FINISHED GRADE ARE ESTABLISHED. SEED AND SOIL AMENDMENTS SHALL BE PLACED ON A PREPARED SEEDBED AT THE FOLLOWING RATES PER ACRE. STRAW MULCH SHALL BE TACKED WITH TACKING AGENT APPLIED BY HYDROSEEDER.

LIME	4,000 LBS
FERTILIZER (10-10-10)	1,000 LBS
KY-31 FESCUE	100 LBS
STRAW MULCH	60-80 BALES
FOR SUMMER SEEDING ADD TO THE ABOVE:	
GERMAN MILLET	40 LBS
SMALL-STEMMED SUDAN GRASS	50 LBS
FOR WINTER SEEDING ADD TO THE ABOVE:	
RYE GRAIN	120 LBS

IF HYDROSEEDING, WOOD CELLULOSE MAY BE USED IN ADDITION TO STRAW MULCH AT THE RATE OF 1,000 LBS PER ACRE.

ALL SEEDING SHALL BE MAINTAINED, WATERED ETC.., UNTIL A PERMANENT VEGETATIVE GROUND COVER IS ESTABLISHED OVER ALL DISTURBED AREAS.

FOR ALL SLOPES 2:1 OR STEEPER ADD TO THE ABOVE:

PURE LIVE SEED SWITCHGRASS	4 LBS
BROWNTOP MILLET	8 LBS
GRAIN SORGHUM	2 LBS

ALL SLOPES 2:1 OR STEEPER SHALL BE COVERED BY EROSION CONTROL MATTING.

NATIVE SEEDING:

THE CORRECT SEEDBED pH IS 5.5 TO 6.5.

APPLY ZERO NITROGEN AT PLANTING.

INCORPORATE SOIL AMENDMENTS INTO TOPSOIL/ROOT ZONE BEFORE SEEDING.

FIRM SEEDBED BEFORE SEEDING (TRAVEL WITH DOZER CLEATS).

SEEDING DEPTH FOR ALL NATIVE SSP. (EXCEPT E.GAMAGRASS) NEED TO BE 1/4" - 1/2". GREATER DEPTHS CAUSE HIGH SEED MORTALITY.

SPECIALIZED SEEDING IMPLEMENTS ARE REQUIRED. SEED MIXES AND RATES TO MATCH SEEDER USED. A NO-TILL, DROP SEEDER OR BROADCASTER WITH PRECISION METERING TO CONTROL SMALL SEED FLOW AND PICKER WHEEL AGITATORS TO HANDLE FLUFFY SEED ARE BEST SUITED FOR NATIVE SEED.

NATIVE PLANT SEEDING MIX FOR STREAM OR RIVERBANK STABILIZATION

SEEDING FOR STREAM OR RIVERBANK STABILIZATION SHALL BE A MIXTURE OF NATIVE GRASSES, PLANTS AND TREES. NATIVE PLANT MIX SHALL INCLUDE THE FOLLOWING:

GRASSES - BIG BLUESTEM, INDIAN GRASS, LITTLE BLUESTEM, SWITCHGRASS	5 LBS/ACRE EACH
AUGUST THRU MAY - GREENRYE	25 LBS/ACRE EACH
MAY 1 THRU AUGUST - MILLET	25 LBS/ACRE EACH

TREES - RED MAPLE (ACER RUBRUM), REDBUD (CERCIS CANADENSIS), LEYLAND CYPRESS (CUPRESSOCYPARIS LEYANDII) AND LAUREL (PRUNUS LAUROCERASUS) 'OTTO LUYKEN', 'SCHIPKAENSIS'.

NATIVE PLANT MIX VARIATIONS SHALL BE APPROVED BY ENGINEER.

NOTE: NO FERTILIZER SHALL BE USED WITHIN 10' OF TOP OF STREAM OR RIVER BANK.

12. – MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

13. – REMOVE SOIL EROSION CONTROL MEASURES AND STABILIZE THESE AREAS.

14. – REQUEST FINAL APPROVAL BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.

EXISTING CONDITIONS LEGEND

SYMBOL	DESCRIPTION
TEL PED	TELEPHONE PEDESTAL
ELEC PED	ELECTRIC PEDESTAL
CATV PED	CABLE TV PEDESTAL
SIGN	SIGN
CATV	UNDERGROUND CABLE TV SIGN
UG FOC	UNDERGROUND FIBER OPTIC CABLE SIGN
UG FOC	UNDERGROUND TELEPHONE CABLE SIGN
UG GAS	UNDERGROUND GAS LINE SIGN
UG ELEC	UNDERGROUND ELECTRIC LINE SIGN
LP	LIGHT POLE
PP	UTILITY POLE
	GUY WIRE ANCHOR
MH	MANHOLE
SSMH	SANITARY SEWER MANHOLE
SDMH	STORM DRAIN MANHOLE
COMMH	COMMUNICATION MANHOLE
ELMH	ELECTRICAL MANHOLE
J.B.	JUNCTION BOX
SPIGOT	SPIGOT/YARD HYDRANT
C.O.	SEWER CLEAN-OUT
E.SS	ELECTRIC SERVICE STUB-OUT
G.SS	GAS SERVICE STUB-OUT
CB	CATCH BASIN
CI	CURB INLET
WM	WATER METER
FH	FIRE HYDRANT
WV	WATER VALVE
BLOW OFF VALV.	BLOW OFF VALVE
G/M	GAS METER
G/V	GAS VALVE
ICV	IRRIGATION CONTROL VALVE
PIV	POST INDICATOR VALVE
E.JUNC	ELECTRIC JUNCTION BOX OR OUTLET

SYMBOL	DESCRIPTION
	CALCULATED POINT
IPS	1/2" REBAR SET WITH CAP
	CONCRETE MONUMENT
CM-R/W	RIGHT-OF-WAY MONUMENT
DOT MON	D.O.T. CONTROL POINT
RBF	REBAR FOUND
PK NL	PK NAIL FOUND / SET
SPINDLE	SPINDLE FOUND / SET
CPHUB	HUB & TACK SET
CP/NL	CONTROL POINT NAIL SET / FOUND
CP/NL GPS	CONTROL POINT/NAIL SET GPS
CP/TEMP	CONTROL POINT TEMPORARY MARK
STAKE	STAKE FOUND
40	INTERSTATE HIGHWAY
66	U.S. HIGHWAY
FFE ELEVATION	FINISHED FLOOR ELEVATION
MW	MONITORING WELL
PZ	PIEZOMETER
	LANDFILL GAS MONITORING PROBE
	SURFACE WATER SAMPLING LOCATION
	LANDFILL GAS VENT
	LANDFILL GAS COLLECTION WELLHEAD
W	POTABLE WATER WELL
MB	MAILBOX OR PAPER BOX
PB	POSTAL DROP BOX
SAT DISH	SATELLITE DISH
YARD ORNAMENT	STATUE, BIRD BATHS, ETC.
	TREES
	SHURBS / BUSHES

LINE TYPE	DESCRIPTION
	CULVERT
X	FENCE
	SILT FENCE
	GUARD RAIL
S	APPROXIMATE LOCATION OF EXISTING SEWER LINES
W	APPROXIMATE LOCATION OF EXISTING WATER LINES
G	APPROXIMATE LOCATION OF EXISTING GAS LINES
	TOP & TOE LINES
DL	DITCH LINES
CTV	APPROXIMATE LOCATION OF UNDERGROUND CABLE TV LINE
CTV	APPROXIMATE LOCATION OF OVERHEAD CABLE TV LINE
FOC	APPROXIMATE LOCATION OF UNDERGROUND FIBER OPTIC CABLE LINE
E	APPROXIMATE LOCATION OF UNDERGROUND ELECTRIC LINE
E	APPROXIMATE LOCATION OF OVERHEAD ELECTRIC LINE
T	APPROXIMATE LOCATION OF UNDERGROUND TELEPHONE LINES
T	APPROXIMATE LOCATION OF OVERHEAD TELEPHONE LINES
ROW	RIGHT-OF-WAY
	TREELINE
	SHRUBLINE
	PROPERTY LINE NOT SURVEYED
	ROCKLINE
	STREAM LINE
	CENTERLINE ROADS
℄	CENTERLINE OTHER THAN ROADS
	SWAMPLINE/WETLANDS

ABBREVIATION	DESCRIPTION
IPS	IRON PIN SET
RBF	REBAR FOUND
OTIPF	OPEN TOP IRON PIN FOUND
CTIPF	CRIMPED TOP IRON PIN FOUND
CMU	CONCRETE MASONRY UNIT
R/W	RIGHT OF WAY
℄	CENTERLINE
C	CURVE (SEE CURVE TABLE)
POB	POINT OF BEGINNING
CP	CALCULATED POINT
PB	PLAT BOOK
DB	DEED BOOK
L	LINE (SEE LINE TABLE)
BLDG	BUILDING
CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
CPP	CORRUGATED PLASTIC PIPE
DIP	DUCTILE IRON PIPE
E&T	ELECTRIC & TELEPHONE
FOC	FIBER OPTIC CABLE
GIP	GALVANIZED IRON PIPE
O/H	OVERHEAD
RCP	REINFORCED CONCRETE PIPE
U/G	UNDERGROUND
VCP	VITRIFIED CLAY PIPE
PVC	POLYVINYL CHLORIDE PIPE
FFE	FINISHED FLOOR ELEVATION
PG	PAGE
REF	REFERENCE
DOT	DEPARTMENT OF TRANSPORTATION
NGS	NATIONAL GEODETIC SYRVEY
NCSP	NORTH CAROLINA STATE PLANE

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By [signature] Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034476 ENGINEER BEN T. CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DAP, KS
CADD BY: DAP, KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME:
RD-09.00728 G-001 Cover_G-002-Notes.dwg

GENERAL NOTES AND LEGENDS

SHEET
G-002

PLAN

150 0 75 150 300 450

GRAPHIC SCALE 1 INCH = 150 FEET

ASBESTOS DISPOSAL SITE

STONEY MOUNTAIN ROAD LANDFILL FACILITY APPROXIMATE PROPERTY LINE

STONEY MOUNTAIN ROAD LANDFILL FACILITY PROPERTY LINE

SEDIMENT BASIN

COMPOSTING AREA

CLOSED DEMOLITION LANDFILL AREA

SEDIMENT BASIN

APPROXIMATE WASTE LIMITS

CLOSED C & D LANDFILL LOCATED ON TOP OF CLOSED MSW AREA

MULCHING & GRINDING AREA

CLOSED WOOD WASTE/ WHITE GOODS

WHITE GOODS AREA

CLOSED MSW DISPOSAL AREA

NCDOT ROAD, SEE SHEET C-102

SCALE AREA IMPROVEMENTS

SEDIMENT BASIN

CLOSED MSW DISPOSAL AREA

CONVENIENCE CENTER AREA LIMITS OF DISTURBANCE

RECYCLING & MSW WASTE DROP-OFF AREA

CONVENIENCE CENTER

CP #29007 REBAR W/CAP N: 601,964.44 E: 957,059.18 ELEV.: 2217.42

HENDERSON COUNTY HUMANE SOCIETY

HENDERSON COUNTY SCHOOL BUS DEPOT

TRANSFER STATION

CP #29008 REBAR W/CAP N: 601,710.98 E: 957,715.84 ELEV.: 2225.84

CLOSED TVA LANDFILL

CLOSED C&D LANDFILL

SEDIMENT BASIN

SEDIMENT BASIN

ACTIVITY CENTER

SEDIMENT BASIN

SEDIMENT BASIN

EXISTING SCALE HOUSE & SCALES

PRIVATE PROPERTY

AREA OF STREAM IMPACT (10 L.F.)

AREA OF STREAM IMPACT (125 L.F.)

CLOSED ENTRANCE

STONEY MOUNTAIN ROAD LANDFILL FACILITY APPROXIMATE PROPERTY LINE

SEDIMENT BASIN

NOTES:

1. EXISTING TOPOGRAPHIC INFORMATION PREPARED FROM AERIAL TOPOGRAPHIC SURVEY PERFORMED BY CAROLINA RESOURCE MAPPING, DATED DECEMBER 10, 2009, AND FROM A SURVEY PERFORMED BY MCGILL ASSOCIATES ON JANUARY 11–14, 2010.
2. PROPERTY LINES SHOWN ON PLANS WERE OBTAINED FROM HENDERSON COUNTY GIS WEB SITE AND ARE APPROXIMATE ONLY.
3. WASTE LIMIT BOUNDARIES FOR CLOSED MSW LANDFILL, CLOSED TVA LANDFILL AND WOOD WASTE/WHITE GOODS OBTAINED FROM CDM DRAWING TITLED "EXISTING CONDITIONS AS OF 2/26/98". SHEET NO. C–1 DATED FEBRUARY, 2001.
4. WASTE LIMIT BOUNDARY FOR CLOSED C&D LANDFILL FROM MCGILL ASSOCIATES DRAWING TITLED "HENDERSON COUNTY LANDFILL, RECORD DRAWING, C&D LANDFILL – PHASE 1" DATED SEPTEMBER, 2009.
5. WASTE LIMIT BOUNDARY FOR DEMOLITION LANDFILL AREA AND ASBESTOS DISPOSAL SITE OBTAINED FROM WILLIAM G. LAPSLEY & ASSOCIATES, P.A. DRAWING TITLED "SITE PLAN–PROPOSED FINAL CONTOURS–EXISTING CONTOURS 1992". DATED JANUARY, 1993.
6. HORIZONTAL COORDINATES ARE NAD 83 (NSRS 2007). VERTICAL COORDINATES ARE NAVD88.

LEGEND

LANDFILL FACILITY PROPERTY LINE

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034429 ENGINEER KEVIN CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH: (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DAP, KS
CADD BY: DAP, KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-101 Overall Site Plan.dwg

OVERALL SITE PLAN

SHEET
C-101

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PLAN

40 0 20 40 80 120

GRAPHIC SCALE 1 INCH = 40 FEET

CLOSED MSW DISPOSAL AREA

APPROXIMATE EXISTING WASTE LIMITS

LANDFILL SCALE HOUSE & SCALES

CAP RECONSTRUCTION THICKNESS VERIFICATION LOCATION, TYP. OF 10

ASPHALT PAVEMENT

MSW/RECYCLE DROP-OFF AREA

CP #29007
REBAR W/CAP
N: 601,964.44
E: 957,059.18
ELEV.: 2217.42

CP #29008
REBAR W/CAP
N: 601,710.98
E: 957,715.84
ELEV.: 2225.84

HENDERSON COUNTY
SCHOOL BUS MAINTENANCE FACILITY

EXISTING TRANSFER STATION #1

EXISTING TRANSFER STATION #2

APPROXIMATE LOCATION EXISTING 3" F.M.

SANITARY SEWER MANHOLE
TOP EL: 2192.74'
8" PVC I.E. IN: 2185.95'
8" PVC I.E. OUT: 2187.58'

CATCH BASIN
TOP EL: 2188.85'
24" CMP I.E. IN: 2184.14'
36" RCP I.E. OUT: 2183.95'

CATCH BASIN
TOP EL: 2197.09'
12" CMP I.E. IN: 2182.34'
18" CMP I.E. OUT: 2181.94'

CATCH BASIN
TOP EL: 2191.10'
18" CMP I.E. IN: 2187.35'
24" CMP I.E. OUT: 2187.28'

I.E.: 2217.77'

I.E.: 2217.79'

I.E.: 2219.23'

I.E.: 2209.39'

I.E.: 2244.74'

I.E.: 2250.38'

CAP RECONSTRUCTION NOTES:

1. WASTE LIMITS SHOWN WERE OBTAINED FROM DRAWINGS PREPARED BY CDM ENGINEERING. WASTE LIMITS ARE APPROXIMATE ONLY. CAP RECONSTRUCTION SHALL TAKE PLACE IN ANY LOCATION WHERE WASTE IS FOUND DURING THE GRADING OF THIS PROJECT.
2. ALL LEACHATE SHALL BE CONTAINED ON SITE. CONTRACTOR SHALL INSTALL TEMPORARY DIVERSION BERMS AND LEACHATE CONTAINMENT AREA PRIOR TO DISTURBING THE EXISTING CAP. LEACHATE CONTAINED SHALL BE REMOVED BY THE CONTRACTOR OR PUMPED/TRANSPORTED TO EXISTING PUMP STATION WEST OF EXISTING SCALE HOUSE. CONTRACTOR WILL BE REQUIRED TO IMPLEMENT ALL NECESSARY PROVISIONS TO CONTAIN RUNOFF (LEACHATE) FROM EXPOSED WASTE AREAS FROM LEAVING THE SITE. CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES/ASSESSMENTS/PENALTIES LEVIED ON THE COUNTY DUE TO ANY SUCH RELEASES OF LEACHATE FROM THE SITE AS A RESULT OF THEIR WORK.
3. FOR GRADING IN THE AREA WITHIN THE WASTE LIMITS IN THE VICINITY OF THE PROPOSED SCALE HOUSE, AND IN ALL AREAS WHERE WASTE IS DISCOVERED, CONTRACTOR SHALL REMOVE WASTES TO A DEPTH BELOW SUBGRADE ELEVATION AS PER THE DETAILS SHOWN ON SHEET C-505. CONTRACTOR SHALL THEN INSTALL CAP MATERIAL MEETING THE REQUIREMENTS SHOWN IN THE DETAIL. THE AREA OF THE CAP RECONSTRUCTION WILL BE POTHOLED ON A GRID NO GREATER THAN 50' X 50' TO VERIFY DEPTH OF COVER. SOIL PERMEABILITY TESTING SHALL BE PERFORMED AT A MINIMUM OF TWO LOCATIONS IN THE VICINITY OF THE SCALE HOUSE GRADING.
4. SOIL COVER REMOVED IN THE VICINITY OF THE CAP RECONSTRUCTION SHALL BE PLACED WITHIN THE WASTE LIMITS SHOWN AT THE MSW/RECYCLE DROP-OFF AREA.
5. ALL CAP RECONSTRUCTION OVER EXISTING WASTE AREAS WAS COMPLETED IN ACCORDANCE WITH THE SITE SPECIFIC CONSTRUCTION QUALITY ASSURANCE PLAN.

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034429 ENGINEER BEN T. CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH: (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DP
CADD BY: DP
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 CD-102 Scale Area Cap Reconstruction.dwg

SCALE AREA
CAP RECONSTRUCTION

SHEET
CD-102

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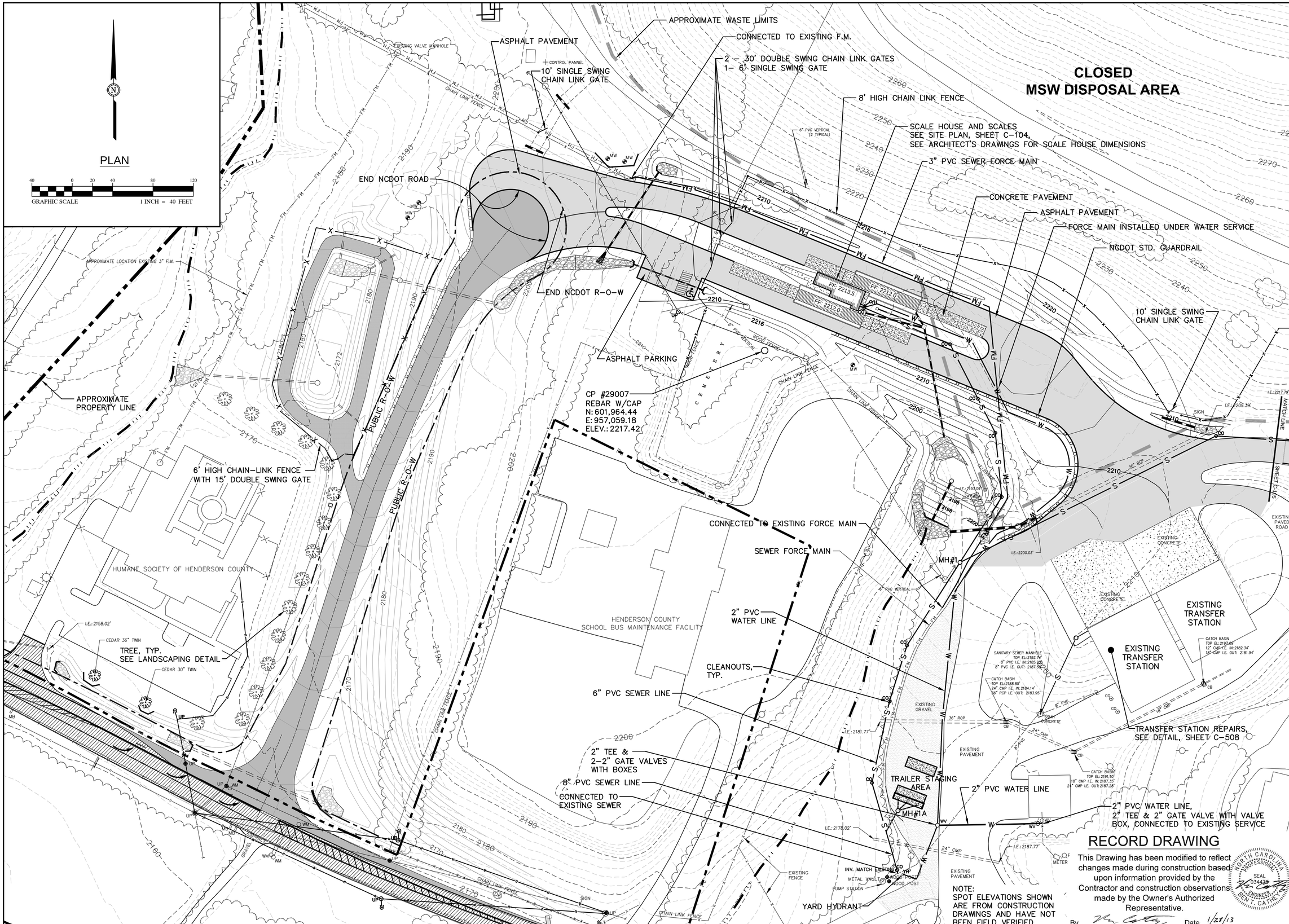

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034476 ENGINEER BENT. CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DP
CADD BY: DP
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-102 Scale Area Site Plan.dwg

SCALE AREA
SITE PLAN

SHEET
C-102

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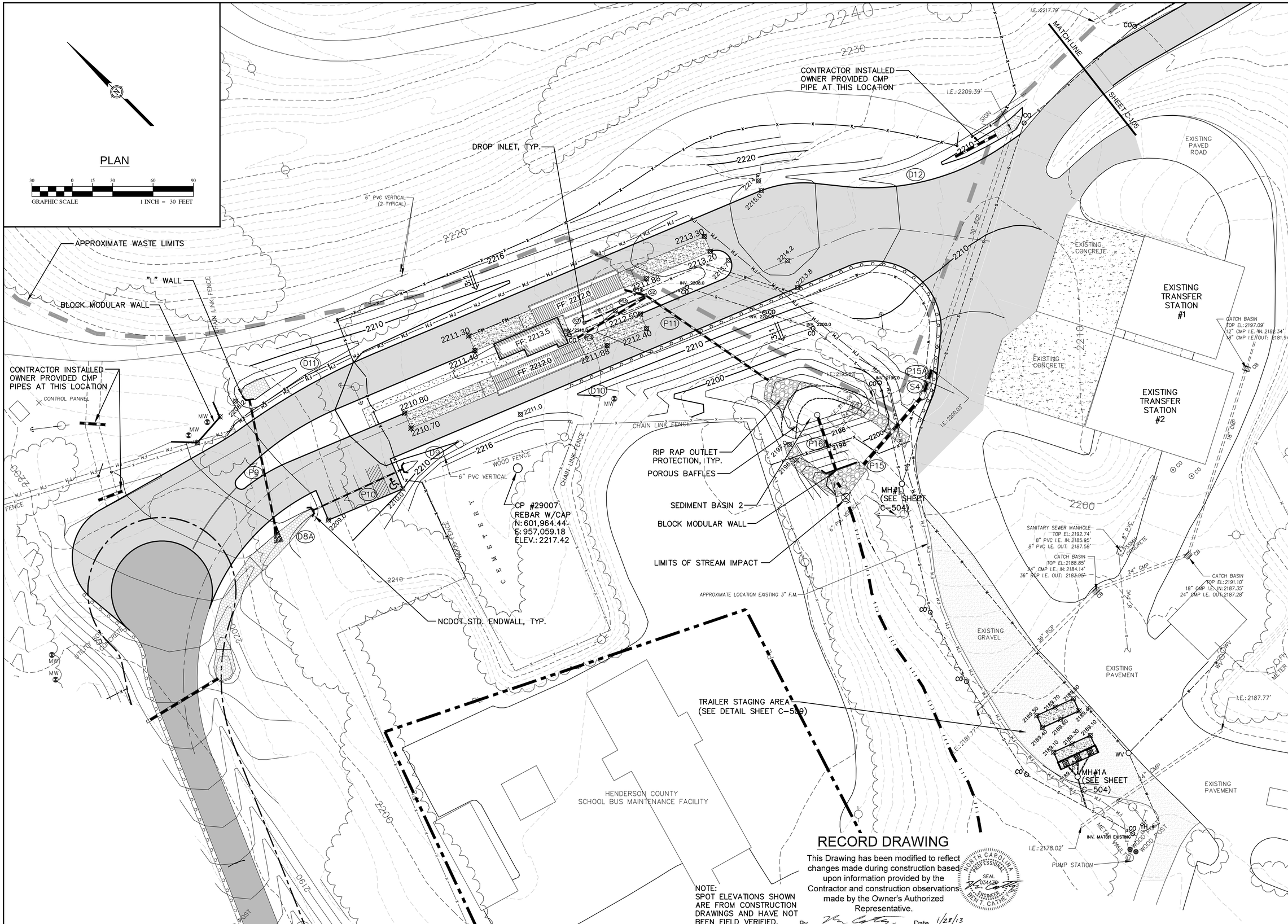

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034476 ENGINEER BENT CATHEY

NOTE:
SPOT ELEVATIONS SHOWN ARE FROM CONSTRUCTION DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED.

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DP
CADD BY: DP
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-103 Scale Area Grading Drainage & Erosion Control.dwg

SCALE AREA
GRADING, DRAINAGE &
EROSION CONTROL PLAN

SHEET
C-103

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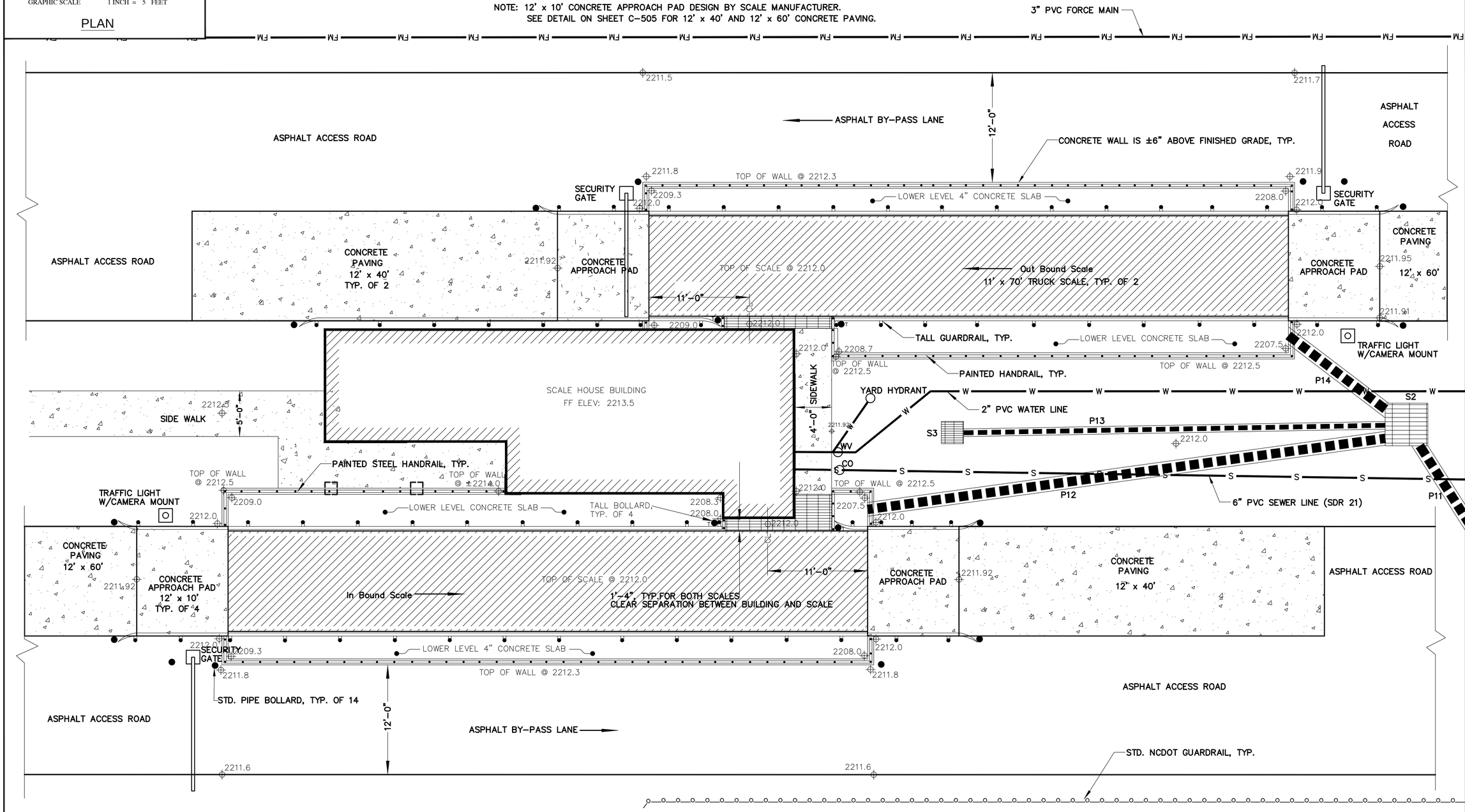
GRAPHIC SCALE 1 INCH = 5 FEET

PLAN

NOTE: 12' x 10' CONCRETE APPROACH PAD DESIGN BY SCALE MANUFACTURER.
SEE DETAIL ON SHEET C-505 FOR 12' x 40' AND 12' x 60' CONCRETE PAVING.



SCALE AREA NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR SCALE HOUSE DIMENSIONS AND REQUIREMENTS.
2. SEE STRUCTURAL DRAWINGS FOR REQUIREMENTS OF RETAINING WALLS AT SCALE PIT AND AT SCALE HOUSE.
3. SCALE FOUNDATION AND 12' x 10' APPROACH PAD DETAILS PER SCALE MANUFACTURER'S REQUIREMENTS.

NOTE:
SPOT ELEVATIONS SHOWN ARE FROM CONSTRUCTION DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED.

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034328 ENGINEER KEVIN T. CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DAP
CADD BY: DAP
DESIGN REVIEW: JBB
CONST. REVIEW: MKW
FILE NAME: RD\09.00728 C-104 Scale House Site Plan.dwg

SCALE HOUSE SITE PLAN

SHEET
C-104

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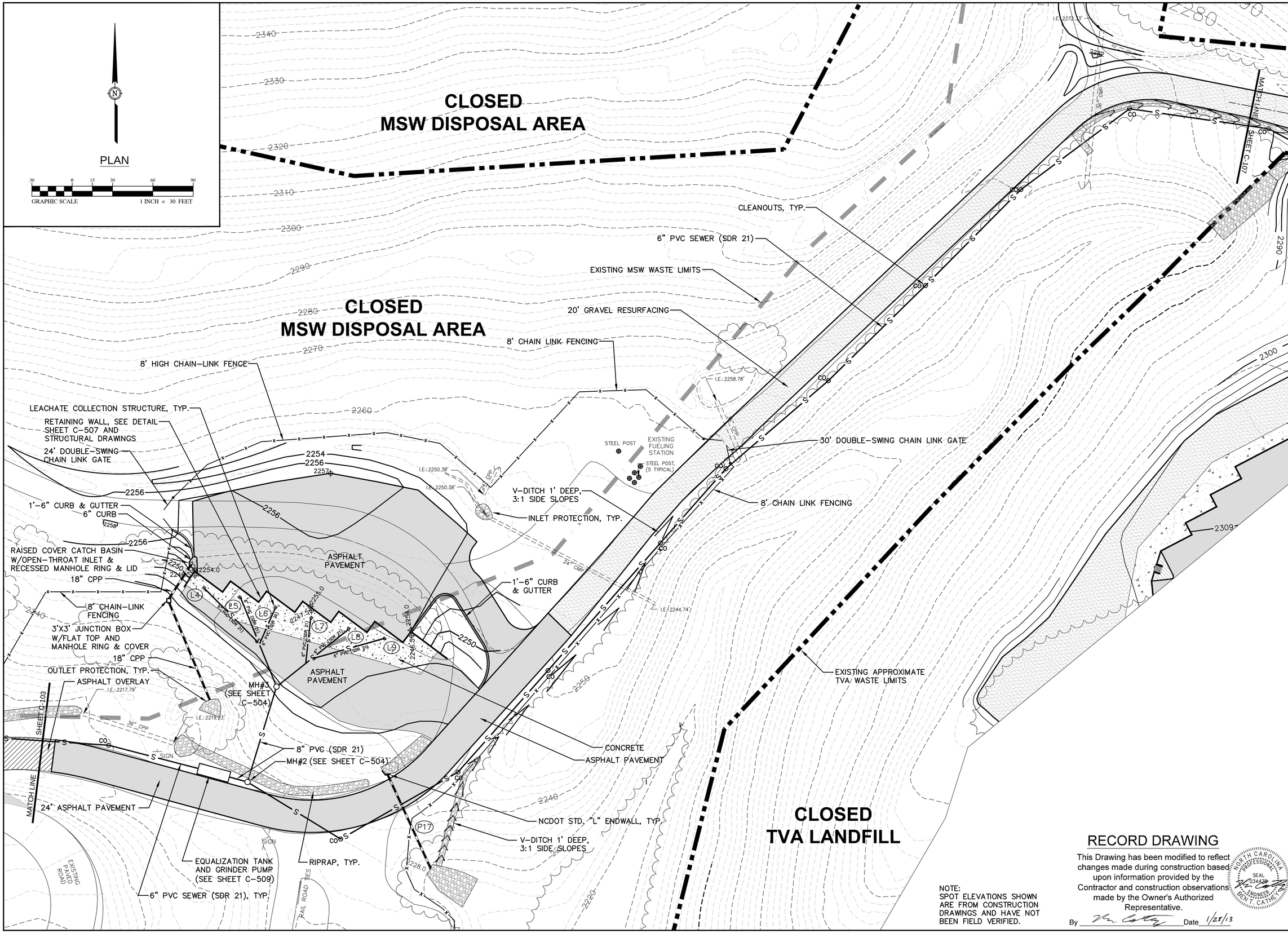

NOTE:
SPOT ELEVATIONS SHOWN ARE FROM CONSTRUCTION DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED.

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034476 ENGINEER BENT CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DAP
CADD BY: DAP
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728-C-105 MSW-Recycling Drop-Off Area Grading Drainage & Erosion Control Plan.dwg

MSW / RECYCLING
DROP-OFF AREA
GRADING, DRAINAGE &
EROSION CONTROL PLAN

SHEET
C-105

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PLAN

50 0 25 50 100 150

GRAPHIC SCALE 1 INCH = 50 FEET

STONEY MOUNTAIN ROAD
SR 1383

MATCH LINE
STA 19+00

30' ENHANCED BUFFER

ENHANCED BUFFER

NCDOT STD. "L" ENDWALL

24' WIDE PAVED ACCESS ROAD

10' SINGLE-SWING, 6' HIGH CHAIN LINK GATE

APPROXIMATE PROPERTY LINE

42' DOUBLE-SLIDE 6' HIGH CHAIN LINK GATE

20' DOUBLE-SWING 6' HIGH CHAIN LINK GATE

SEDIMENT BASIN 3

GRASSED EMERGENCY SPILLWAY

POROUS BAFFLES

6' HIGH CHAIN LINK FENCING

CONNECTED TO EXISTING CATCH BASIN

CATCH BASIN
TOP EL: 2206.28'
15" CMP I.E. IN: 2204.14'
15" CMP I.E. OUT: 2203.92'

CATCH BASIN
TOP EL: 2205.03'
15" CMP I.E. IN: 2202.59'
15" CMP I.E. OUT: 2202.50'

CATCH BASIN
TOP EL: 2203.14'
15" CMP I.E. IN: 2200.98'
15" CMP I.E. OUT: 2200.87'

NOTE:
SPOT ELEVATIONS SHOWN ARE FROM CONSTRUCTION DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED.

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034328 ENGINEER BRENT CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: KS
CADD BY: KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD\09.00728-C106 Convenience Center Access Road Plan Sta 10+00 thru Sta 19+00.dwg

CONVENIENCE CENTER
ACCESS ROAD PLAN
STA 10+00 THRU STA 19+00

SHEET
C-106

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PLAN

50 0 25 50 100 150

GRAPHIC SCALE 1 INCH = 50 FEET

WASTE LIMITS

CONCRETE STEPS, TYP

HHW BUILDING

CONCRETE

GRAVEL

RECYCLING DROP-OFF AREA

RETAINING WALL TO ACCOMMODATE RECYCLE COLLECTION ROLL-OFF, SEE DETAIL, SHEET C-507, TYP OF 10.

SEDIMENT BASIN 5

30' DOUBLE-SWING 8' HIGH CHAIN LINK GATES

8' HIGH CHAIN LINK FENCE, TYP

MATCH LINE

INV.2294.0

INV.2290.0

INV.2295.0

EXISTING SEDIMENT BASIN

CLOSED TVA LANDFILL

UNDERDRAIN #1 18" PERFORATED HDPE PIPE

CURB INLET, TYP.

MONITORING WELL, TYP.

SEDIMENT BASIN 4

SOLAR PANELS

ASPHALT

GRAVEL

MH#4 (SEE SHEET C-504)

8" PVC LEACHATE PIPE, TYP.

LEACHATE SYSTEM COLLECTION MANHOLE, SEE SHEET C-504

LEACHATE COLLECTION STRUCTURE

RETAINING WALL TO ACCOMMODATE 40-YARD ROLL-OFF, SEE DETAIL, SHEET C-507, TYP OF 4.

PAVED CONVENIENCE CENTER

WASTE OIL, ANTIFREEZES, BATTERIES, & ELECTRONICS DROP-OFF AREA

MONITORING WELL, SEE DETAIL, SHEET C-506

ATTENDANT BUILDING

PROPERTY LINE

OUTLET PROTECTION, TYP.

POROUS BAFFLES, TYP.

EXISTING SEDIMENT BASIN

CONCRETE FLUME

LIMITS OF STREAM IMPACT

ENDWALL 1 W/ CONCRETE APRON, SEE DETAIL, SHEET C-509

32' DOUBLE-SWING 8' HIGH CHAIN LINK GATE

765 L.F NCDOT STANDARD GUARDRAIL

700 L.F. 18" CURB & GUTTER

NCDOT STD ENDWALL, TYP.

24' WIDE PAVED ACCESS ROAD

CLOSED C&D LANDFILL

WASTE LIMITS

MATCH LINE

STA 19+00

LIMITS OF STREAM IMPACT

EXISTING SEDIMENT BASIN

UNNAMED BRANCH

NOTE:
SPOT ELEVATIONS SHOWN ARE FROM CONSTRUCTION DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED.

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By _____ Date 1/23/13

NORTH CAROLINA PROFESSIONAL SEAL 034578 ENGINEER BENT. CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: KS
CADD BY: KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: I:\2009\09.00728\Design\Solid Waste\Drawings\Record Drawings\RD-09.00728 C-107 Convenience Center Access Road Plan Sta 19+00 thru 26+03.67.dwg

CONVENIENCE CENTER
ACCESS ROAD PLAN
STA 19+00 THRU STA 26+03.67

SHEET
C-107

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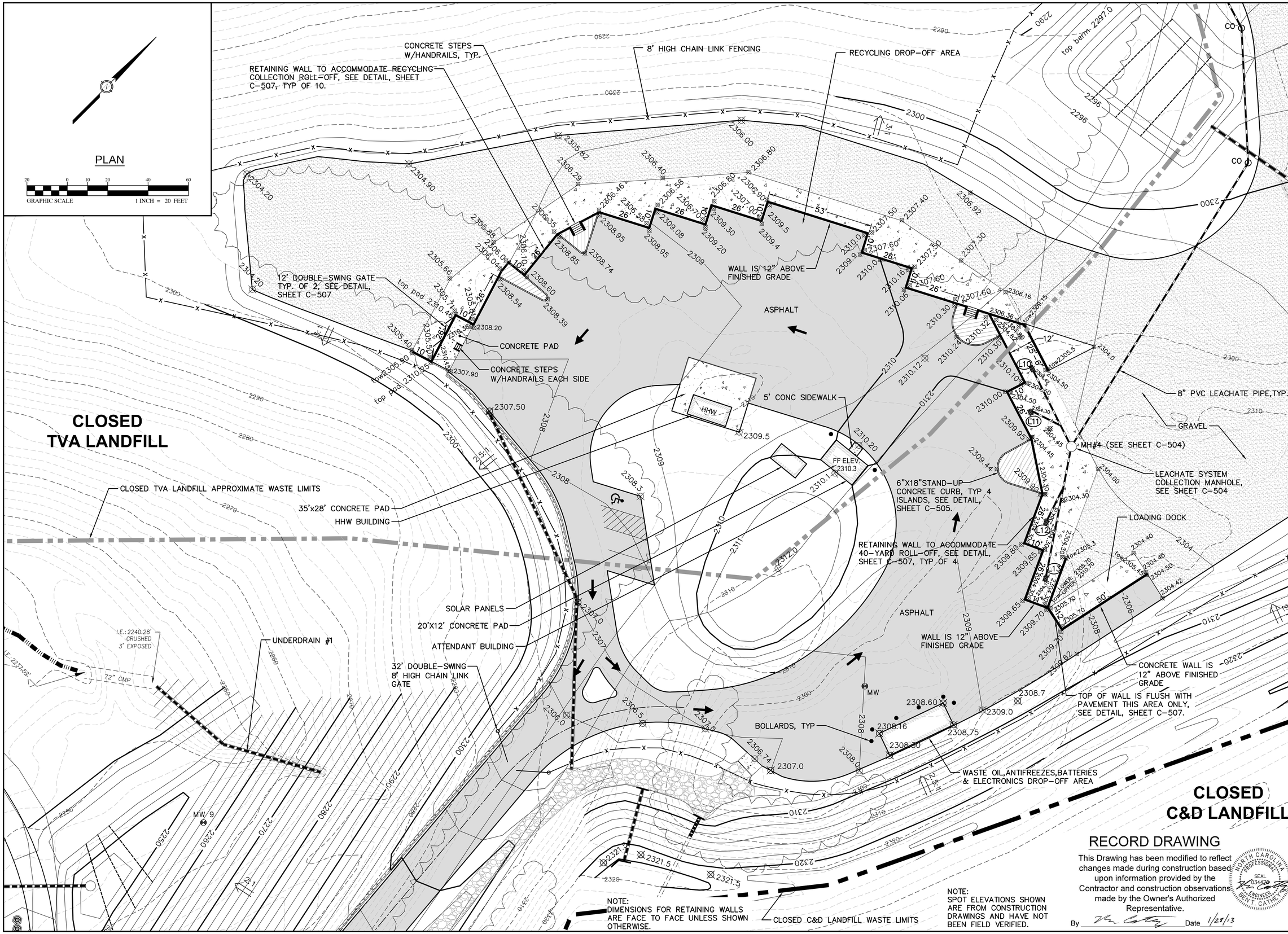

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034476 ENGINEER BEN T. CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: KS
CADD BY: KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-108 Convenience Center Site Plan.dwg

CONVENIENCE CENTER SITE PLAN

SHEET C-108

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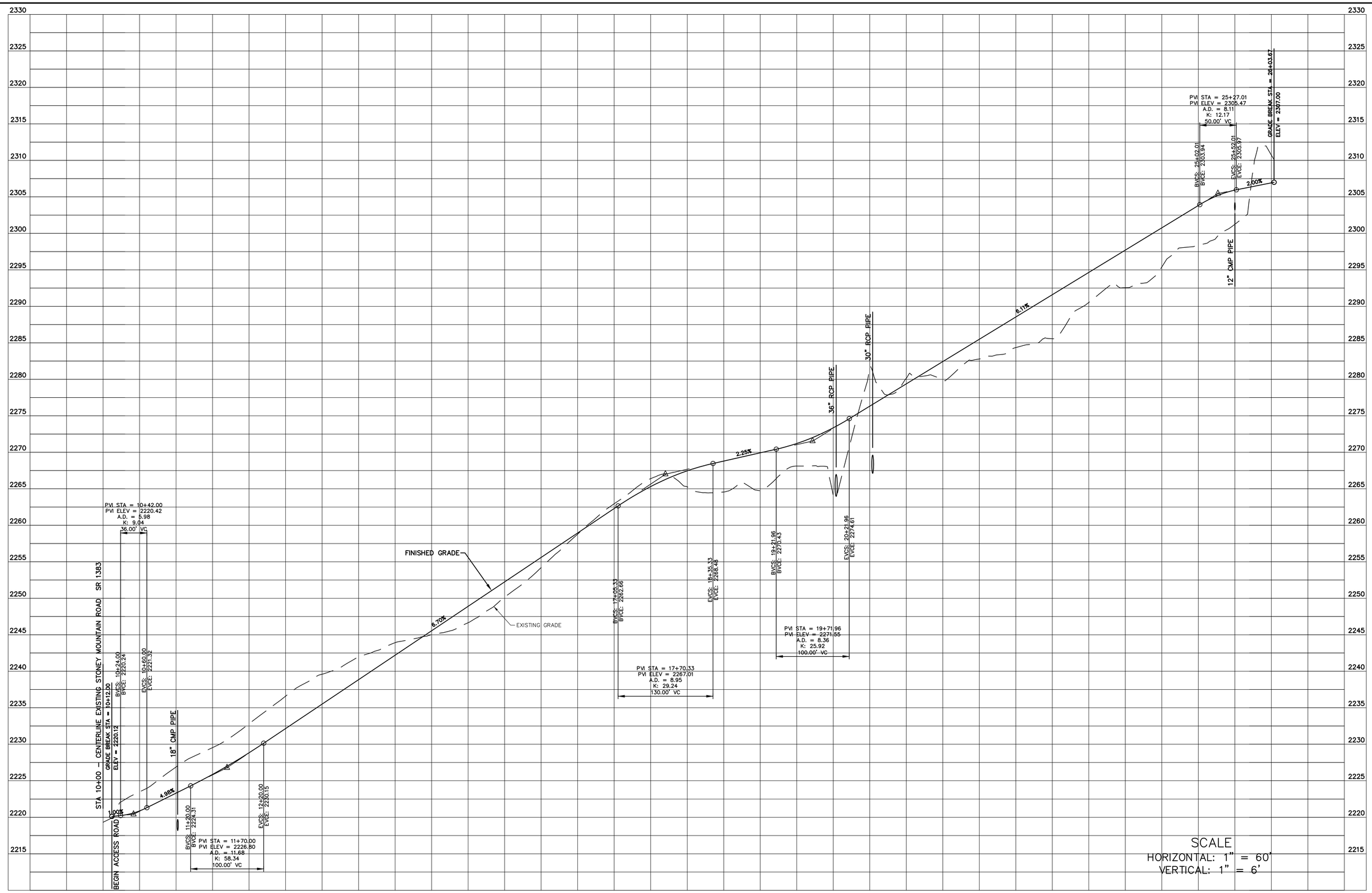

CONVENIENCE CENTER ACCESS ROAD CENTERLINE PROFILE

NOTE: FINAL ELEVATIONS HAVE NOT BEEN FIELD VERIFIED

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034439 ENGINEER BRENT T. CATHEY

McGill Associates
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: KS
CADD BY: KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: C-109 Convenience Center Access Road Profile.dwg
REVISIONS:

CONVENIENCE CENTER ACCESS ROAD PROFILE

SHEET
C-109

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PLAN

50 0 25 50 100 150

GRAPHIC SCALE 1 INCH = 50 FEET

24" HDPE PIPE

SEDIMENT BASIN 8

PROPERTY LINE

COMPOSTING AREA

WASTE LIMITS

CLOSED DEMOLITION LANDFILL AREA

RIP RAP OUTLET PROTECTION, TYP.

CHECK DAMS, TYP.

CLOSED MSW DISPOSAL AREA

APPROXIMATE MSW WASTE LIMITS

MULCHING & GRINDING AREA

CLOSED WOOD WASTE / WHITE GOODS AREA

WASTE LIMITS

RAISED COVER CATCH BASIN W/OPEN THROAT INLET & RECESSED MANHOLE RING & LID

MATCH LINE

24' WIDE GRAVEL ROAD

SHEET C-110

NOTE:
SPOT ELEVATIONS SHOWN ARE FROM CONSTRUCTION DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED.

RECORD DRAWING

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By _____ Date 1/23/13

NORTH CAROLINA PROFESSIONAL SEAL 034578 ENGINEER BEN T. CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: KS
CADD BY: KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-110 Composting & White Goods Plan.dwg

COMPOSTING & WHITE GOODS PLAN

SHEET
C-110

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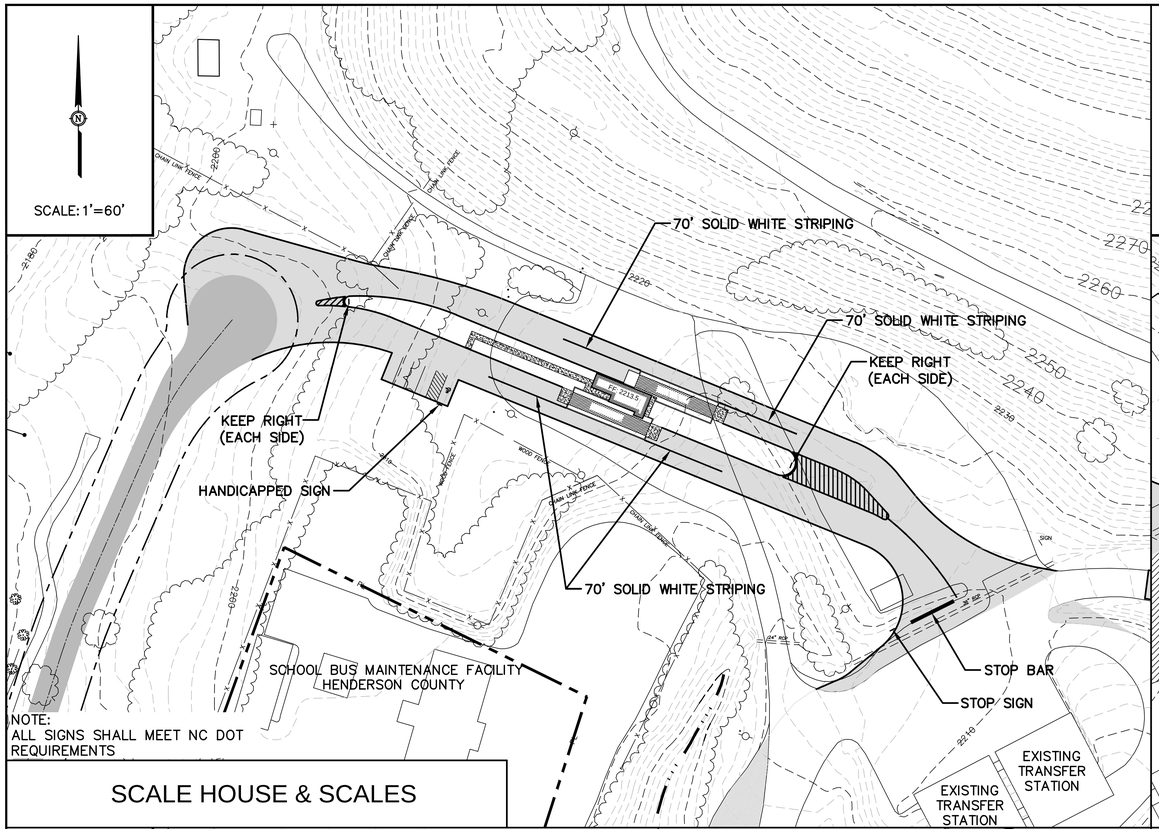
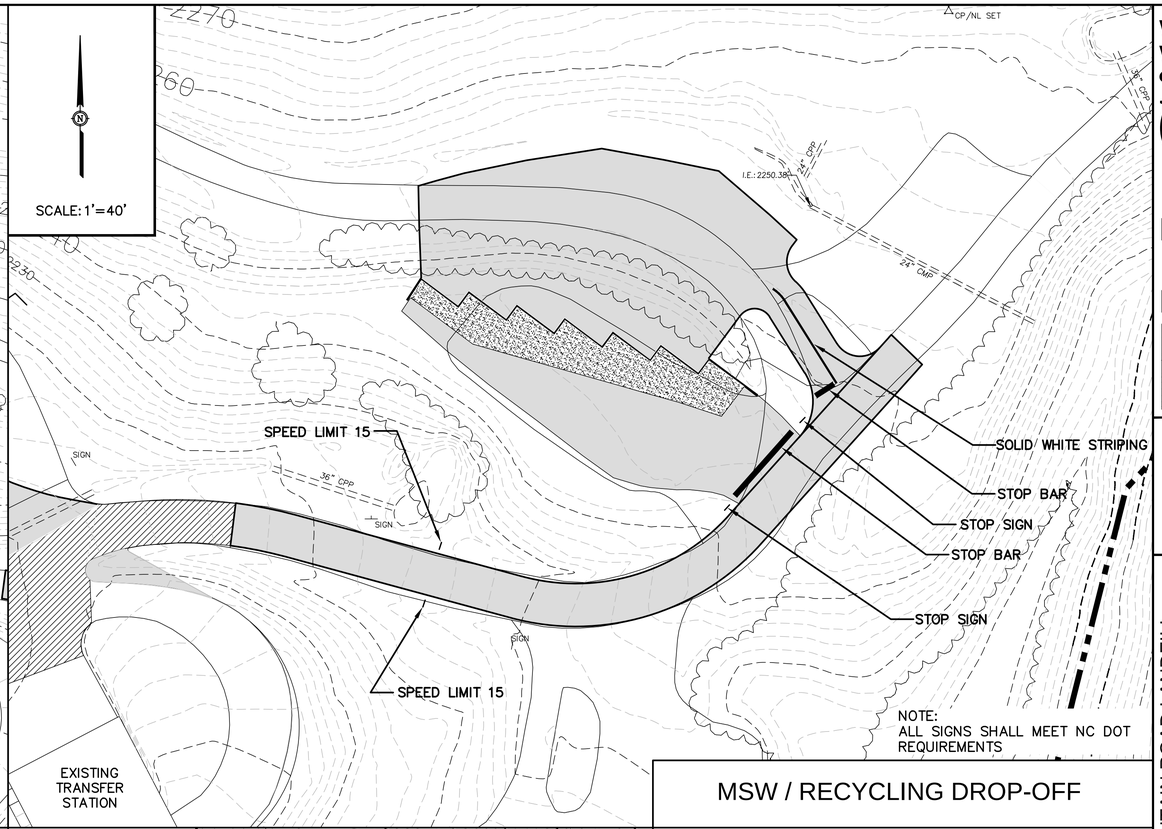
SCALE: 1'=60'



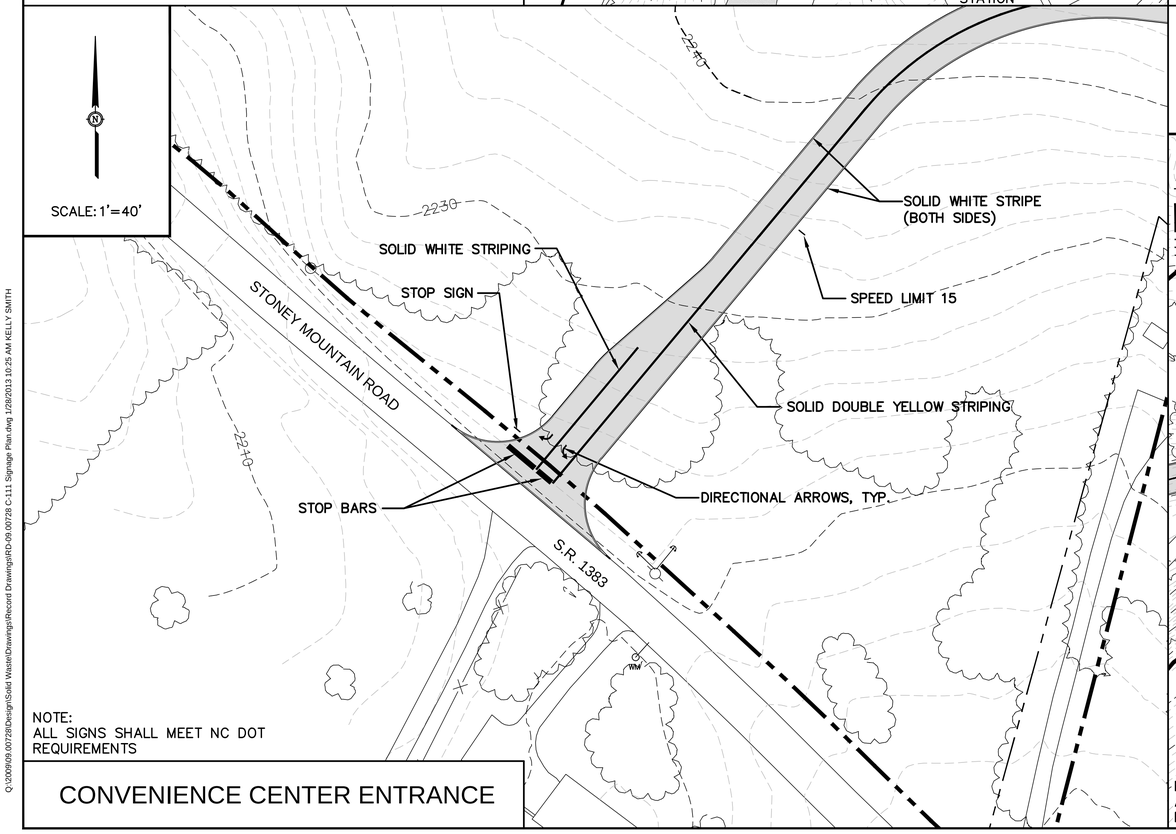
SCALE HOUSE & SCALES

SCALE: 1'=40'



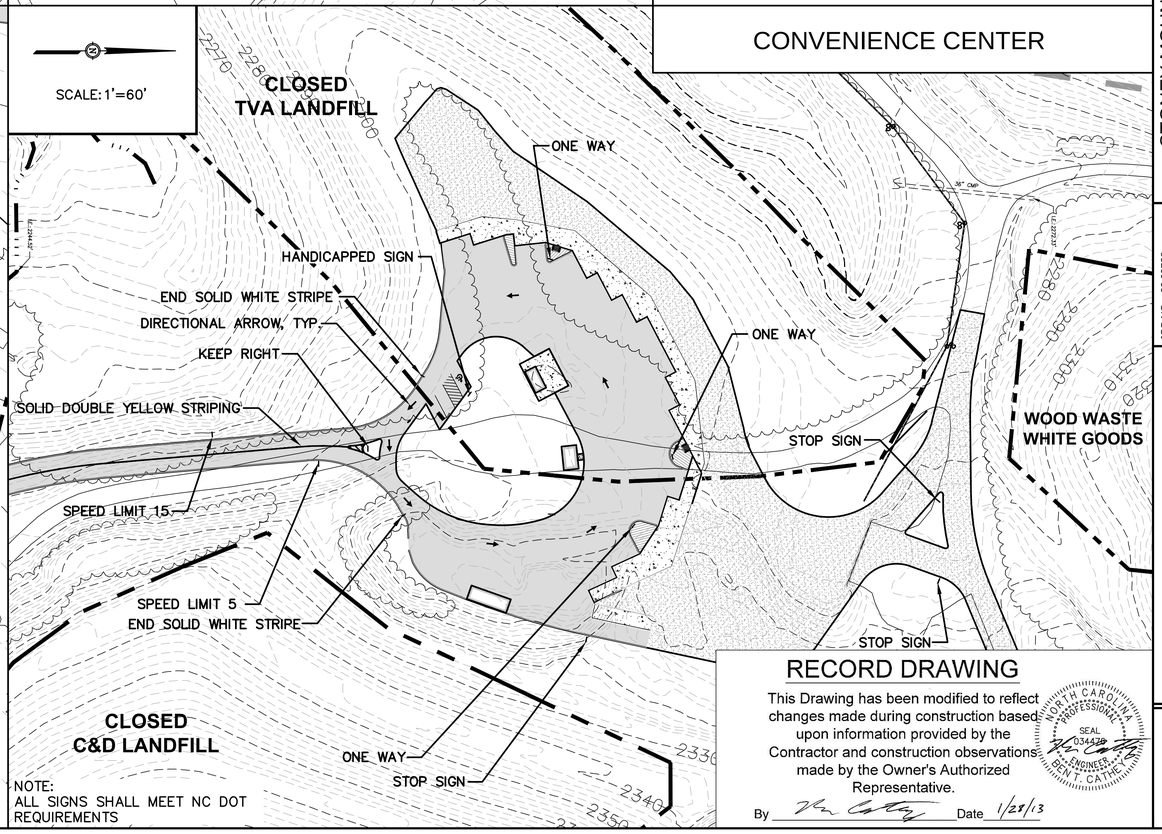
MSW / RECYCLING DROP-OFF

SCALE: 1'=40'



CONVENIENCE CENTER ENTRANCE

SCALE: 1'=60'



CONVENIENCE CENTER

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034428 ENGINEER BENT. CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DP
CADD BY: DP
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-111 Signage Plan.dwg

SIGNAGE PLAN

SHEET
C-111

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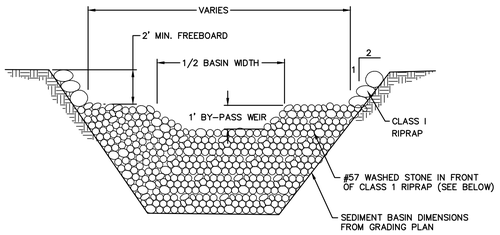
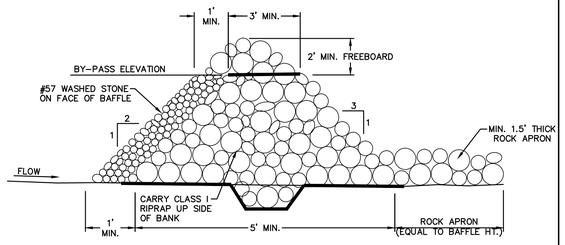


FACE VIEW



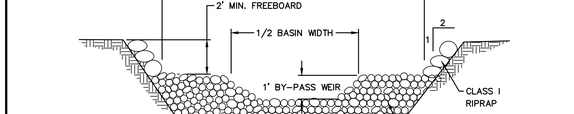
SIDE VIEW

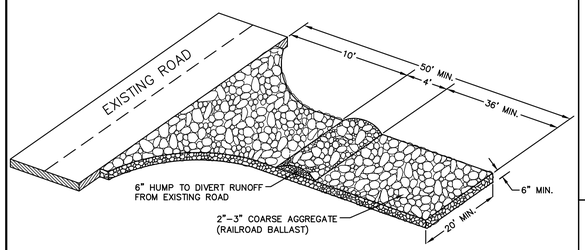
NOTES:

1. RIRAP AND WASHED STONE SHALL BE CHECKED AFTER EACH RAINFALL TO ENSURE AGAINST EROSION AND SHALL BE REPAIRED AS REQUIRED.
2. SEDIMENT SHALL BE REMOVED WHEN DEPTH OF SEDIMENT REACHES 1/2 HEIGHT OF BAFFLE.
3. SEDIMENT BASINS REQUIRE A MIN. OF 3 BAFFLES.

ROCK BAFFLE FOR SEDIMENT BASINS

N.T.S.



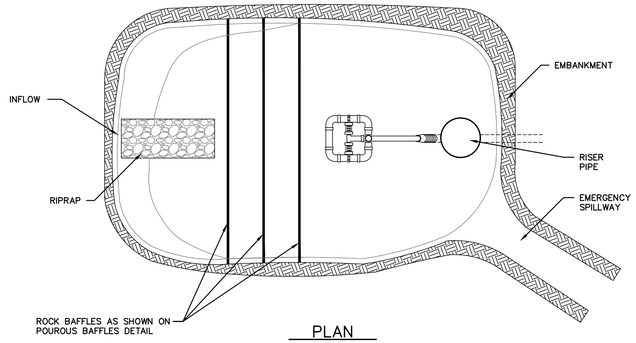


NOTES:

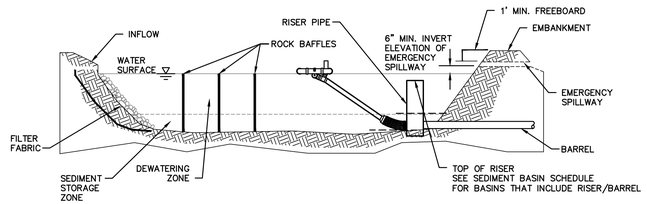
1. A STABILIZED PAD OF CRUSHED STONE SHALL BE LOCATED WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM AN EXISTING ROAD.
2. STONE TO BE 2 – 3 INCH WASHED STONE RAILROAD BALLAST.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
5. WHEN NECESSARY WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET, WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.
6. REFERENCE NCDENR LAND QUALITY SECTION DESIGN MANUAL: 6.06.

STABILIZED CONSTRUCTION ENTRANCE

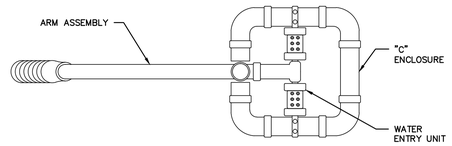
REVISION DATE - NOVEMBER 3, 2008



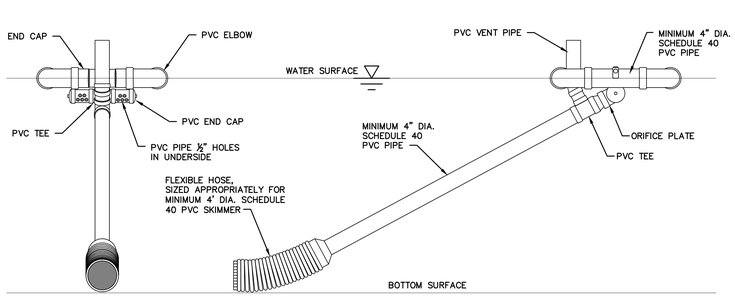
PLAN



SECTION



TOP VIEW

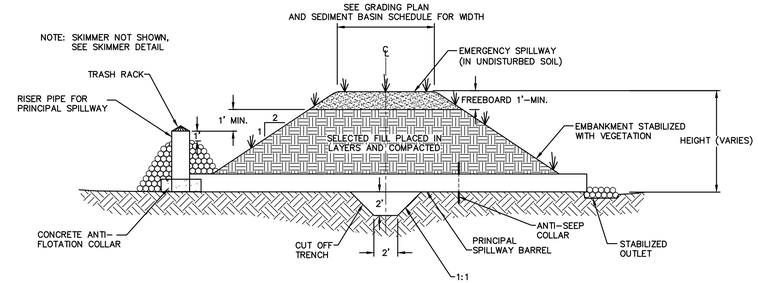


END VIEW FRONT VIEW

NOTE:

ALL SLOPE SIDES AND WEIRS WILL BE SEEDED AND MATTED (NAG S75 OR APPROVED EQUAL)AT THE CONCLUSION OF CONSTRUCTION.

SKIMMER DETAIL

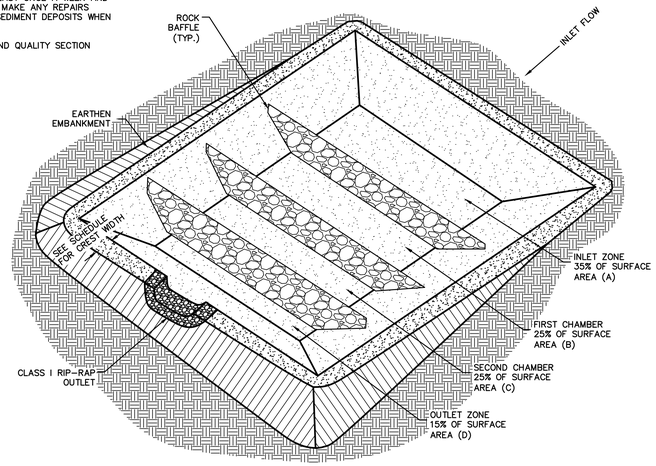


SEDIMENT BASIN WITH RISER

REVISION DATE - NOVEMBER 3, 2008

NOTES:

1. INLET ZONE (A) SHOULD HAVE 35% OF SURFACE AREA. FIRST CELL (B) SHOULD HAVE 25% OF SURFACE AREA, SECOND CELL (C) SHOULD HAVE 25% OF SURFACE AREA AND THE OUTLET ZONE (D) SHOULD HAVE 15% OF SURFACE AREA.
2. INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL.
3. REFERENCE NCDENR LAND QUALITY SECTION DESIGN MANUAL: 6.65.



POROUS BAFFLES FOR SEDIMENT BASINS

N.T.S.

SEDIMENT BASIN SCHEDULE

BASIN#	TOP BERM ELEV. (ft)	EMERGENCY SPILLWAY ELEV. (ft)	TOP OF RISER (ft)	EMERGENCY SPILLWAY (D x WIDTH)	BERM WIDTH (FT)	RISER SIZE (inches)	BARREL SIZE (inches)	BARREL INV. IN ELEV. (ft)	BARREL INV. OUT ELEV. (ft)	FLOTATION BLOCK DIMENSIONS (FT)	AVG. LENGTH (FT)	AVG. WIDTH (FT)	SKIMMER ORIFICE SIZE (IN)	SKIMMER INVERT ELEV. (FT)	
SB1*	2181.0	2179.5	2178.0	1.5'X10'	16'	36"	24"	2171.0	2170.0	3'X3'X1.5'	150	50	3.5"	2171.0	
SB2	2198.0	2197.0	2196.0	1'X10'	10'	24"	15"	2191.5	2190.0	2.5X2.5'X1'	80	35	1.8"	2191.5	
SB3	2218.0	2216.5	2215.0	1'X10'	22'	24"	15"	2212.0	2206.5	2.5X2.5'X1'	130	65	2.75"	2212.0	
SB4	2254.0	2252.5	2251.0	1'X8'	14'	30"	18"	2246.5	2246.0	3X3'X1'	100	30	1.0"	2246.5	
SB5	2297.0	2295.0	N/A	2'X12'	10'	N/A	N/A	N/A	N/A**	N/A	80	50	2.75"	2291.0	
~~SB6~~	~~2346.0~~	~~2344.5~~	~~2343.0~~	~~1'X8'~~	~~10'~~	~~24"~~	~~15"~~	~~2340.0~~	~~2327.0~~	~~2.5X2.5'X1'~~	~~60~~	~~30~~	~~1.0"~~	~~2340.0~~	NOT USED
~~7~~	~~2346.0~~	~~2344.5~~	~~2343.0~~	~~1'X8'~~	~~10'~~	~~24"~~	~~15"~~	~~2340.0~~	~~2330.0~~	~~2.5X2.5'X1'~~	~~130~~	~~40~~	~~1.5"~~	~~2340.0~~	NOT USED
SB8	2344.0	2342.5	2341.0	1'X8'	10'	30"	18"	2338.0	2337.0	3X3'X1'	80	40	1.5"	2338.0	
~~9~~	~~2346.0~~	~~2344.0~~	~~N/A~~	~~1.5'X10'~~	~~10'~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~42~~	~~21~~	~~1.25"~~	~~2341.0~~	NOT USED

* NOTE:
SEDIMENT BASIN BY OTHERS, NOT IN CONTRACT

** NOTE:
SKIMMER DISCHARGES INTO 8" PVC PIPE @ 2% MIN. SLOPE TO DAYLIGHT

NOTE:
FINAL ELEVATIONS SHOWN HAVE NOT BEEN FIELD VERIFIED

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034428 ENGINEER BRENT T. CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DAP, KS
CADD BY: DAP, KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-501, C-510 Miscellaneous Details.dwg

MISCELLANEOUS DETAILS

SHEET
C-501

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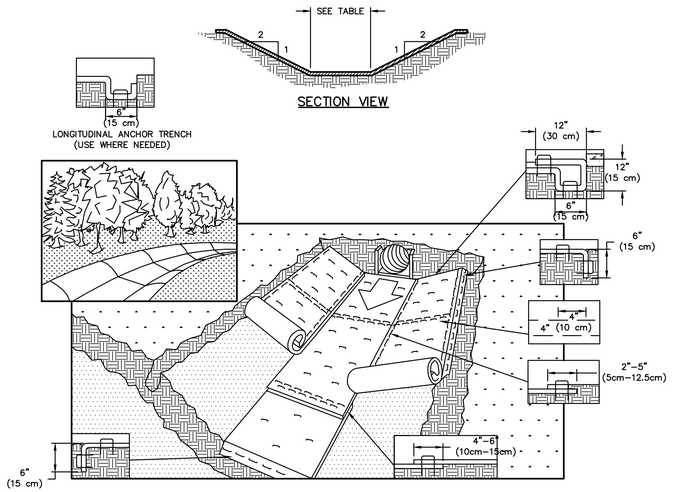
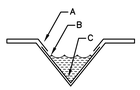


NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP'S IN A 12" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL CENTER RECP'S IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP'S WILL UNROLL WITH APPROXIMATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES PER MANUFACTURER'S RECOMMENDATIONS.
4. PLACE CONSECUTIVE RECP'S END OVER END WITH A 4" – 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP'S
5. FULL LENGTH EDGE OF OF RECP'S AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2" – 5" (DEPENDING ON TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF CHANNEL.
8. THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLE/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
9. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.
10. SEE SCHDULE FOR PRODUCT TYPES.
11. PRESS ENDS OF MATTING 4" INTO GROUND AROUND STRUCTURES AND STAPLE SECURELY.



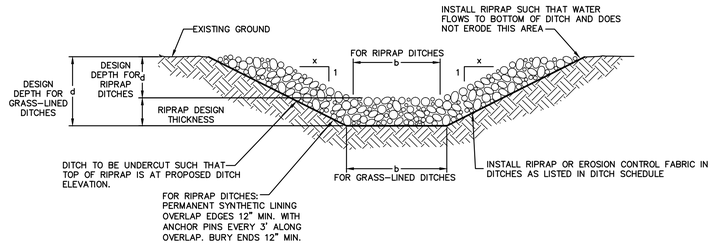
CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTES:

1. HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
2. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP'S.

CHANNEL STABILIZATION WITH MATTING

REVISION DATE - NOVEMBER 3, 2008



TYPICAL DITCH DETAIL

REVISION DATE - NOVEMBER 3, 2008

DITCH SCHEDULE

DITCH#	DITCH SLOPE(%)	BOTTOM WIDTH (FEET)	DEPTH (FEET)	SIDE SLOPES	RIPRAP THICKNESS	CHANNEL LINING	
D1	2.0	4.0	1.5	2:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D2	7.8	2.0	1.5	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S75	
D3	6.3	1.0	1.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S75	
D4	7.0	3.0	2.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D5	6.3	6.0	2.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D6	2.5	3.0	1.5	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S75	
D7	10.2	3.0	1.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D8	6.8	3.0	2.0	3:1	18"	RIPRAP, D_{50}= 9"	
D8A	4.5	2.0	2.0	3:1	—	RIPRAP, D_{50}= 6"	
D9	5.8	0.0	2.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S75	
D10*	13.7	3.0	2.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D11	1.7	2.0	1.5	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D12	3.4	1.0	1.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S75	
D50	10.0	6.0	2.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D51	6.7	4.0	2.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D52	6.7	3.0	2.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D53	11.5	2.0	2.0	2:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D54	14.7	3.0	2.0	2:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D55	5.9	4.0	2.0	2:1	18"	RIPRAP, D_{50}= 9"	
D56	7.1	2.0	1.0	2:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S75	
D57	6.5	4.0	2.0	2:1	18"	RIPRAP, D_{50}= 9"	
D58	2.2	2.0	2.0	2:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S75	
D59	8.5	1.0	1.0	2:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	
D60*	2.0	3.5	2.0	3:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S75	
D61*	5.7	6.0	2.0	3:1	21"	RIPRAP, D_{50}= 9"	
D62*	15.0	6.0	1.0	4:1	21"	RIPRAP, D_{50}= 9"	
D63	4.6	4.0	2.0	2:1	18"	RIPRAP, D_{50}= 9"	
D64	3.5	2.0	2.0	2:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S75	NOT USED
D65	MATCH EXISTING GRADE	2.0	1.5	2:1	—	NORTH AMERICAN GREEN SYNTHETIC LINER S150	

NOTE:
DITCHES D1–D8 INSTALLED BY OTHERS, NOT IN CONTRACT

* DITCH WIDENS AS NOTED ON THE GRADING PLAN. AVERAGE NOTED HERE.

NOTES:
1. NORTH AMERICAN GREEN SYNTHETIC LINER OR APPROVED EQUIVALENT SHALL BE USED WHERE NOTED. INSTALL PER MANUFACTURERS RECOMMENDATION.
2. ALL RIPRAP DITCHES AND RIPRAP INLET/OUTLET PROTECTION TO INCLUDE MIRAFI 140N, OR APPROVED EQUAL.
3. DITCHES D14 THRU D49 NOT USED.

STORM DRAINAGE PIPE SCHEDULE

PIPE	MATERIAL	SIZE	LENGTH	INV. IN ELEV.	INV. OUT ELEV.	SLOPE	
P1A	MATCH EXISTING	MATCH EXISTING	8 LF	2152.69	MATCH EXISTING	0.35%	
P1	HDPE	24"	108 LF	2156.5	2155.6	0.77%	
P2	HDPE	24"	140 LF	2182.4	2160.8	1.1%	
P3	HDPE	30"	94 LF	2195.0	2180.0	16.0%	
P4	BCCMP+	30"	28 LF	2179.5	2179.0	1.8%	
P5	BCCMP+	12"	28 LF	2180.0	2179.0	3.6%	
P6	BCCMP+	18"	28 LF	2179.5	2179.0	1.8%	
P7	BCCMP+	12"	28 LF	2180.0	2179.0	3.6%	
P8	BCCMP+	24"	80 LF	2171.0	2170.0	1.3%	
P9	RCP	24"	102 LF	2205.5	2204.0	1.5%	
P10	ACMP	12"	70 LF	2207.5	2205.5	2.9%	
P11	RCP	18"	108 LF	2206.2	2197.0	8.5%	
P12	ACMP	18"	57 LF	2207.5	2206.7	1.4%	
P13	ACMP	12"	46 LF	2208.2	2207.5	1.5%	
P14	ACMP	18"	14 LF	2207.5	2206.7	5.7%	
P15	ACMP	36"	65 LF	2198.6	2195.0	5.5%	
P15A	RCP	30"	17 LF	2200.03	2199.1	5.0%	
P16	ACMP	18"	40 LF	2191.0	2190.0	2.5%	
P17	ACMP	18"	78 LF	2235.0	2228.0	9.0%	
P18	ACMP	18"	72 LF	2251.0	2246.0	6.9%	
P50	ACMP	15"	153 LF	2212.0	2206.5	3.5%	
P51	ACMP	18"	120 LF	2220.0	2214.0	5.0%	
P52	RCP	36"	76 LF	2263.0	2260.0	3.9%	
P53	RCP	30"	90 LF	2273.5	2260.0	15.0%	
P54	ACMP	18"	68 LF	2256.0	2253.0	4.4%	
P55	ACMP	18"	40 LF	2246.5	2246.0	1.3%	
P56	ACMP	24"	70 LF	2290.0	2284.0	8.6%	
P57	ACMP	12"	83 LF	2303.8	2303.0	1.0%	
P58	ACMP	12"	100 LF	2305.3	2304.3	1.0%	
P59	ACMP	12"	38 LF	2318.0	2306.0	31.6%	
P59A	MATCH EXISTING	18"	10 LF	MATCH EXISTING	2306.5	MATCH EXISTING GRADE	
P60	ACMP	18"	92 LF	2297.5	2295.5	2.2%	
P61	ACMP	18"	137 LF	2318.0	2304.0	10.0%	
P62	ACMP	30"	100 LF	2327.0	2325.0	2.0%	
P63	ACMP	15"	59 LF	2341.0	2327.0	24.0%	NOT USED
P64	BCCMP+	18"	70 LF	2341.0	2330.0	15.9%	NOT USED
P65	RCP	30"	77 LF	2341.0	2340.0	1.3%	
P66	ACMP	18"	116 LF	2239.0	2237.0	1.7%	
P67	HDPE	24"	120 LF	2385.0	2346.0	32.5%	

STORM DRAINAGE PIPE NOTES:

1. * HDPE IS HANCOR BLUE SEAL, OR APPROVED EQUAL.
2. + FULLY BITUMINOUS COATED WITH ASPHALT PAVED INVERT.
3. PIPES P19 THRU P49 NOT USED.
4. ALL PIPES SHALL INCLUDE RIPRAP INLET/OUTLET PROTECTION.

NOTE:
PIPES P1A–P8 INSTALLED BY OTHERS, NOT IN CONTRACT

TEMPORARY SEDIMENT TRAP SCHEDULE

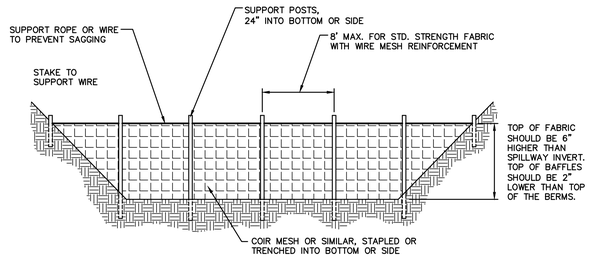
TRAP NUMBER	DISTURBED AREA (ACRES)	LENGTH (FT.)	WIDTH (FT.)	AVG. DEPTH (FT.)	WEIR LENGTH (FT)
1	0.8	80	40	2	8
2	0.4	72	36	1.5	8
TST3	0.9	50	25	2.6	8
TST4	0.1	18	9	1.5	4
TST5	0.15	25	12	1.8	4
TST6	0.2	28	14	1.9	4
TST7	0.1	18	9	1.5	4
TST8	1.1	78	39	2	10
TST9	0.6	66	33	1.5	8
TST10	0.1	14	6	2.5	4
TST11	0.4	35	17	2.5	4
TST12	0.5	42	21	2.5	6
TST13	0.2	26	13	2.2	6

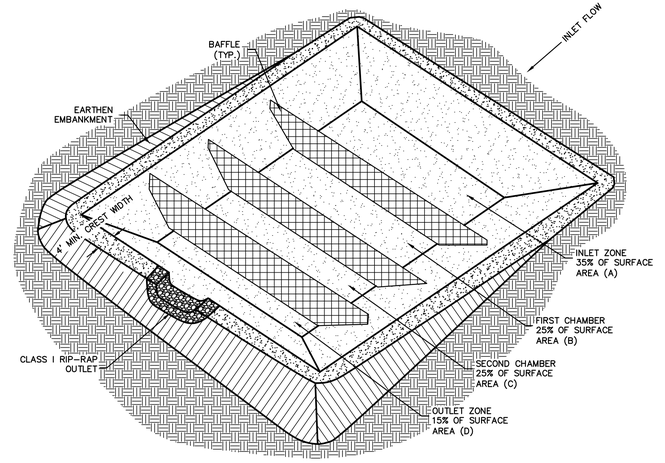
TEMPORARY SEDIMENT TRAP SCHEDULE

REVISION DATE - NOVEMBER 3, 2008

NOTES:

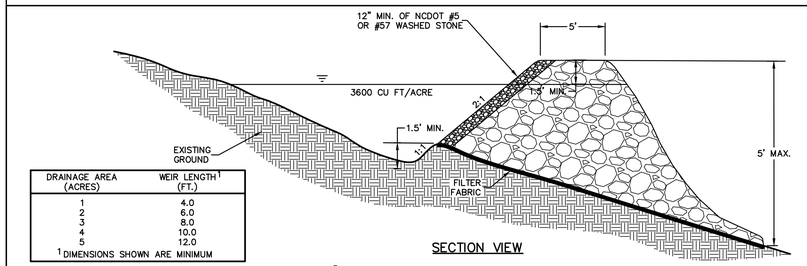
1. INLET ZONE (A) SHOULD HAVE 35% OF SURFACE AREA, FIRST CELL (B) SHOULD HAVE 25% OF SURFACE AREA, SECOND CELL (C) SHOULD HAVE 25% OF SURFACE AREA AND THE OUTLET ZONE (D) SHOULD HAVE 15% OF SURFACE AREA.
2. GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
3. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES, SPACED A MAXIMUM OF 4 FEET APART.
4. DO NOT SPLICE FABRIC. USE ONE CONTINUOUS PIECE ACROSS BASIN.
5. INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL.
6. REFERENCE NCDENR LAND QUALITY SECTION DESIGN MANUAL: 6.65.





POROUS BAFFLES FOR TEMPORARY SEDIMENT TRAPS

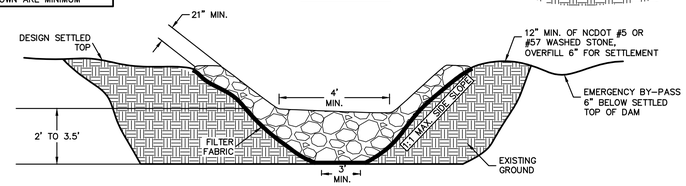
REVISION DATE - NOVEMBER 3, 2008



DRAINAGE AREA (ACRES)	WEIR LENGTH[1] (FT.)
1	4.0
2	6.0
3	8.0
4	10.0
5	12.0

[1] DIMENSIONS SHOWN ARE MINIMUM

SECTION VIEW



WEIR VIEW

NOTE:
TEMPORARY SEDIMENT TRAPS 1 & 2 INSTALLED BY OTHERS, NOT IN CONTRACT

MAINTENANCE SCHEDULE:
1. AT A MINIMUM, TEMPORARY SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT GREATER THAN 1/2–INCH.
2. REMOVE SEDIMENT AND RESTORE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE–HALF THE DESIGN DEPTH OF THE TRAP.
3. PLACE THE SEDIMENT THAT IS REMOVED IN A DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING. DISPLACED RIP–RAP SHALL BE REPLACED IMMEDIATELY.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS WITHIN LIMITS OF DISTURBED AREA TO ALL SEDIMENT TRAPS FOR MAINTENANCE DURING CONSTRUCTION AND REMOVAL UPON PROJECT COMPLETION.

NOTE:
1. SEE BAFFLE DETAIL FOR BAFFLE INSTALLATION PROCEDURE AND SPACING.

TEMPORARY SEDIMENT TRAP

REVISION DATE - NOVEMBER 3, 2008

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

NOTE:
FINAL ELEVATIONS SHOWN HAVE NOT BEEN FIELD VERIFIED

By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034578 ENGINEER BENT T. CATHEY

McGill Associates
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH: (828) 252-0575 FIRM LICENSE # C-0459

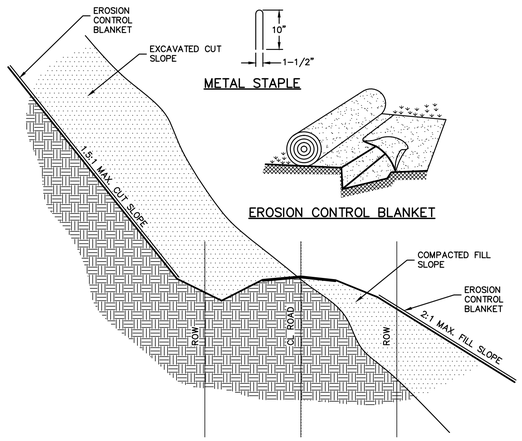
STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DAP, KS
CADD BY: DAP, KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME:
RD.09.00728 C-501, C-510
Miscellaneous Details.dwg

MISCELLANEOUS DETAILS

SHEET
C-502

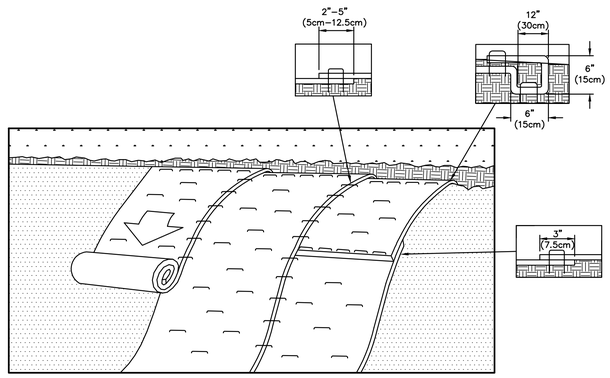
Q:\2009\09.00728\Design\Solid Waste\Drawings\Record Drawings\RD-09.00728 C-501, C-510 Miscellaneous Details.dwg 1/28/2013 9:15 AM KELLY SMITH



NOTES:

1. INSTALLATION OF MATTING SHALL CONFORM TO MANUFACTURER'S REQUIREMENTS.
2. RECP TO BE USED ON SLOPES 2.5:1 OR STEEPER, OR AS SHOWN ON PLANS.
3. MATTING SHALL BE: NORTH AMERICAN GREEN SC150, WESTERN EXCELSIOR EROSION CONTROL BLANKET, OR EQUAL, INSTALL ON ALL DISTURBED SLOPES (CHOSEN PRODUCT MUST BE RATED FOR SLOPES 2:1 TO 1:1).
4. ALLOW 3" MIN. OVERLAP BETWEEN PARALLEL STRIPS.
5. BURY THE TOP END OF THE MAT IN A TRENCH 4" OR MORE IN DEPTH. TAMP THE TRENCH FULL OF SOIL. SECURE WITH ROW OF STAPLES, 10" SPACING, 4" DOWN FROM THE TRENCH. OVERLAP END OF TOP STRIP 4" AND STAPLE.

SLOPE STABILIZATION WITH MATTING



NOTES:

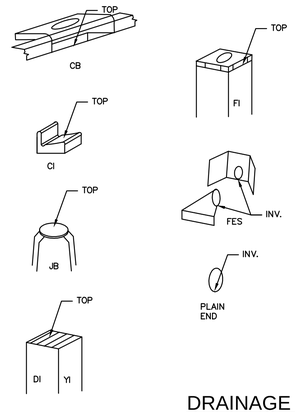
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S DOWN OR HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING AND SPACING STAPLES/STAKES IN APPROPRIATE LOCATIONS PER MANUFACTURER RECOMMENDATIONS.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
6. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

STAPLE/ROLL INSTALLATION

REVISION DATE - NOVEMBER 3, 2008

STORM DRAINAGE STRUCTURE NOTES:

1. SEDIMENT PROTECTION REQUIRED AROUND EACH STRUCTURE IMMEDIATELY AFTER INSTALLATION OF STRUCTURE.



STORM DRAINAGE STRUCTURE SCHEDULE

DRAINAGE STRUCTURE	TYPE	STRUCTURE I.D. DIMENSIONS	TOP ELEVATION	INV. IN ELEV.	INV. OUT ELEV.
~~S1~~	~~JB~~	~~4'x3'~~	~~2185.0~~	~~2180.0~~	~~2179.5~~
S2	YI	4'x4'	2211.2	8" - 2207.5 18" - 2206.7	2206.2
S3	YI	2'x2'	2211.5	–	2208.2
S4	JB	4'x3'	2205.0	2199.1	2198.6
S5	CI	4'x3'	2307.0	2304.3	2303.8
S6	CI	4'x3'	2307.6	–	2305.3

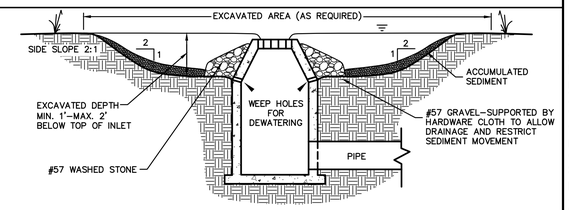
LEACHATE DRAINAGE STRUCTURE SCHEDULE

DRAINAGE STRUCTURE	TYPE	STRUCTURE I.D. DIMENSIONS	TOP ELEVATION	INV. IN ELEV.	INV. OUT ELEV.
L1-L3	DI	2'x2'	2189.20	–	2186.5
L4-L9	DI	3'x3'	SEE DETAIL SHEET C-105	–	3" BELOW TOP OF GRATE
L10	DI	3'x3'	2204.42	–	2301.7
L11	DI	3'x3'	2304.30	–	2301.6
L12	DI	3'x3'	2304.15	–	2301.5
L13	DI	3'x3'	2304.15	–	2301.5

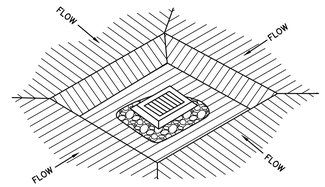
NOTE:
FINAL ELEVATIONS HAVE NOT BEEN FIELD VERIFIED

DRAINAGE STRUCTURE & PIPE SCHEDULES

REVISION DATE - NOVEMBER 3, 2008



SECTION VIEW



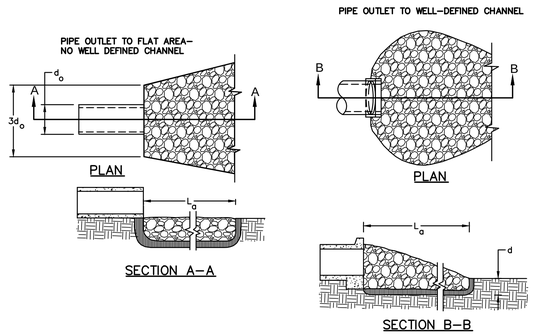
PLAN VIEW

NOTES:

1. SIDE SLOPES TO BE NO STEEPER THAN 2:1.
2. MINIMUM VOLUME TO BE 35 CU.YDS PER DISTURBED ACRE.
3. CLEAN BASIN WHEN VOLUME IS DECREASED BY HALF.

EXCAVATED DROP INLET PROTECTION

REVISION DATE - NOVEMBER 3, 2008



NOTES

1. La IS THE LENGTH OF THE RIPRAP APRON
2. d= 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. FILTER FABRIC (MIRAFI 140N, OR APPROVED EQUAL) SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.
5. REFERENCE NCDENR LAND QUALITY SECTION DESIGN MANUAL: 6.41.
6. INSTALL INLET PROTECTION AS SHOWN ON THE GRADING PLAN, D_{50}= 6", THICKNESS=12".

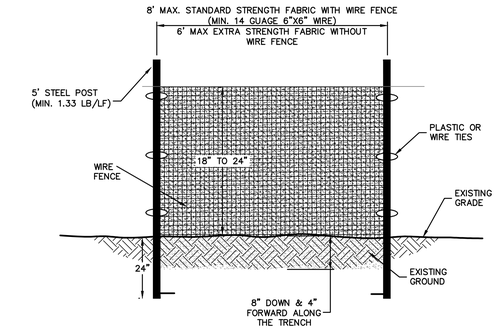
RIPRAP APRON SIZING (PER FIG. 8.06a)

PIPE No.	APRON LENGTH (La)	APRON WIDTH	RIPRAP SIZE D_{50}
9,10,51,54,57,~~60~~	14'	8'	6"
11,15,65,66,67	20'	12'	9"
55,60,62	26'	14'	9"
17,~~18~~,61,64	35'	14'	9"

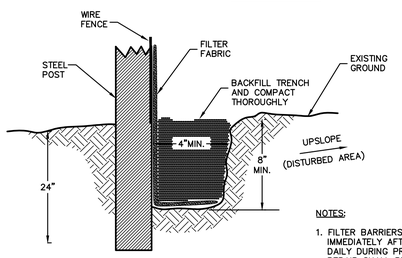
NOTE: P8 APRON LENGTH = ±50'
NOTE: SOME PIPES DAYLIGHT INTO RIPRAP DITCH, SEE DITCH SCHEDULE FOR RIPRAP REQUIREMENTS
NOTE: SEE PLAN FOR P59 & P59 RIPRAP REQUIREMENTS
NOTE: SEE DETAIL SHEET C-509 FOR P52 & P53 RIPRAP REQUIREMENTS

OUTLET PROTECTION

NOT TO SCALE
REVISION DATE - NOVEMBER 3, 2008



SECTION VIEW



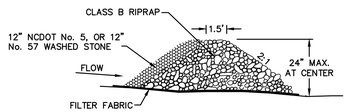
SLOPE	SLOPE LENGTH(FT)	MAXIMUM AREA(SQFT)
<2%	100	10,000
2 TO 5%	75	7,500
5 TO 10%	50	5,000
10 TO 20%	25	2,500
>20%	15	1,500

NOTES:

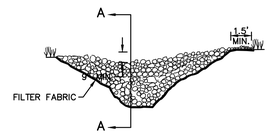
1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND DAILY DURING PROLONGED RAINFALL. REPAIR SHALL BE MADE AS NECESSARY.
2. FABRIC SHALL BE REPLACED PROMPTLY IF FOUND TO BE IN DISREPAIR.
3. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT AND WHEN DEPOSITS REACH APPROXIMATELY 1/3 HEIGHT OF BARRIER.
4. REFERENCE NCDENR LAND QUALITY SECTION DESIGN MANUAL: 6.62.

SEDIMENTATION/SILT FENCE

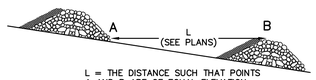
REVISION DATE - NOVEMBER 3, 2008



SECTION A-A



FACE VIEW



L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

DETAIL

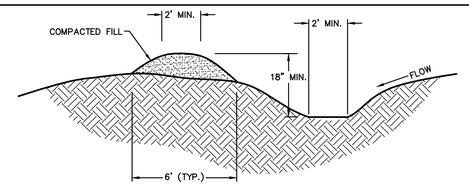
THE FOLLOWING CRITERIA SHOULD BE USED WHEN DESIGNING A CHECK DAM:
- DRAINAGE AREA IS LIMITED TO ONE HALF ACRE.
- KEEP THE MAXIMUM HEIGHT OF 2 FT AT THE CENTER OF THE CHECK DAM.
- KEEP THE CENTER OF THE CHECK DAM AT LEAST 9 INCHES LOWER THAN THE OUTER EDGES AT NATURAL GROUND ELEVATION.
- KEEP THE SIDE SLOPES OF THE DAM AT 2:1 OR FLATTER.
- KEY THE STONE INTO THE DITCH BANKS AND EXTEND BEYOND THE ABUTMENTS 1.5 FEET MINIMUM TO AVOID WASHOUTS FROM OVERFLOW AROUND DAM.
- STABILIZE OUTFLOW AREAS ALONG THE CHANNEL TO RESIST EROSION CAUSED BY CHECK DAMS.

NOTES:

1. INSPECT CHECK DAMS AND CHANNELS WEEKLY AND AFTER EACH RAINFALL OF 1/2" OR GREATER AND REPAIR IMMEDIATELY.
2. CLEAN OUT SEDIMENT AND DEBRIS.
3. ADD STONES TO DAM IF NEEDED TO MAINTAIN DESIGN HEIGHT AND WIDTH.
4. REFERENCE NCDENR LAND QUALITY SECTION DESIGN MANUAL: 6.83

RIPRAP CHECK DAM

REVISION DATE - NOVEMBER 3, 2008



TEMPORARY DIVERSION DITCH

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By _____ Date 1/28/13

NOTE:
FINAL ELEVATIONS SHOWN HAVE NOT BEEN FIELD VERIFIED

NORTH CAROLINA PROFESSIONAL SEAL 034428 ENGINEER BENJAMIN T. CATHEY

McGill Associates
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DAP, KS
CADD BY: DAP, KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-501, C-510 Miscellaneous Details.dwg

MISCELLANEOUS DETAILS

SHEET
C-503

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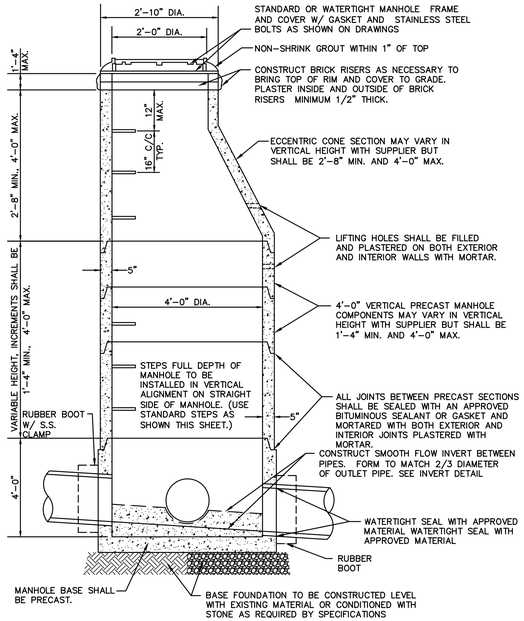


ELEVATION VIEW

NOTE:
FINAL ELEVATIONS HAVE NOT BEEN FIELD VERIFIED

MANHOLE SCHEDULE

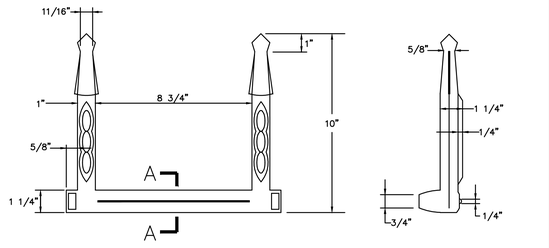
MANHOLE	TOP ELEVATION 'A'	INV. IN ELEV. 'B'	INV. OUT ELEV. 'C'
MH#1	2200.5	2194.7	2194.5
MH#1A	2188.8	2185.5	2185.3
MH#2	2229.0	2221.3	2221.1
MH#3	2246.5	2240.0	2239.8
MH#4	2304.22	2300.2	2300.0

PRECAST MANHOLE NOTES:

1. ALL PRECAST MANHOLE COMPONENTS SHALL MEET REQUIREMENTS OF ASTM C-478, LATEST REVISION.
2. ALL MANHOLES SHALL BE CONSTRUCTED PLUMB
3. ALL MANHOLE GRADES SHOWN ON THE PLANS ARE FOR THE INVERT OF THE MANHOLE CENTER.
4. IF MANHOLE IS SET IN LOCATION OF HIGH WATER TABLE OR UNDERGROUND WATER IS ENCOUNTERED, THE CONTRACTOR SHALL INSTALL UNDERDRAINS AND STONE AS DIRECTED IN THE FIELD BY THE ENGINEER.
5. STEPS SHALL BE INSTALLED ON STRAIGHT SIDE OF MANHOLE.

PRECAST CONCRETE MANHOLE

REVISION DATE - NOVEMBER 3, 2008



PLAN

SIDE ELEVATION

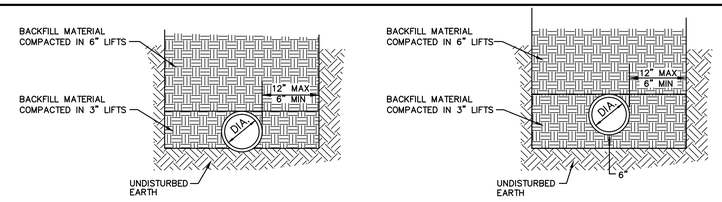
ELEVATION

SECTION A-A

CONSTRUCTION NOTES 1. ALL STEPS SHALL PROTRUDE A MINIMUM OF 5" AND A MAXIMUM OF 7" FROM INSIDE FACE OF STRUCTURE WALL. 2. STEPS DIFFERING IN DIMENSIONS, CONFIGURATION, OR MATERIALS FROM THOSE SHOWN MAY ALSO BE USED PROVIDED THE CONTRACTOR HAS FURNISHED THE ENGINEER WITH DETAILS OF THE PROPOSED STEPS AND HAS RECEIVED PRIOR WRITTEN APPROVAL FROM THE ENGINEER FOR THE USE OF SAID STEPS.

MANHOLE STEPS

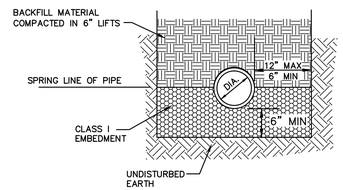
REVISION DATE - NOVEMBER 3, 2008



STANDARD EXCAVATION

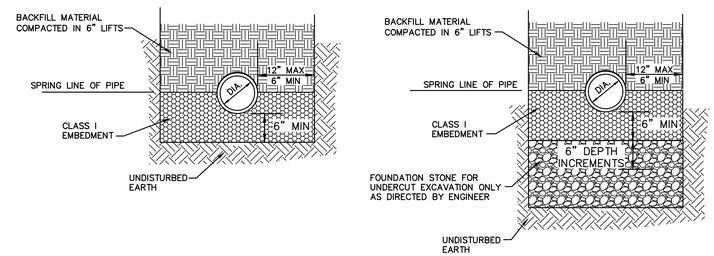
OVERCUT EXCAVATION

DUCTILE IRON GRAVITY SEWER



STANDARD EXCAVATION

PVC GRAVITY SEWER



STANDARD EXCAVATION IN WET CONDITIONS

UNDERCUT EXCAVATION IN UNSTABLE SOILS TYPES

PIPE IN WET OR UNSTABLE CONDITIONS

ALL PIPE TYPES

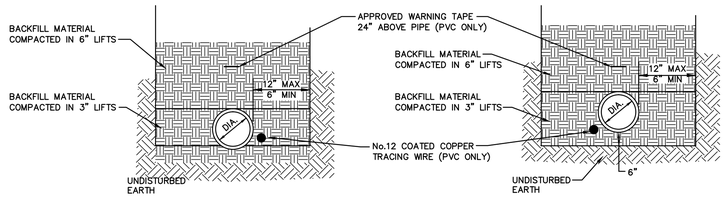
(AS DIRECTED BY ENGINEER)

NOTES:

1. CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.
2. NO ADDITIONAL PAYMENT FOR ROCK EXCAVATION WILL BE MADE.
3. PAYMENT FOR FOUNDATION STONE UNDERCUT SHALL BE FOR THE LENGTH OF THE TRENCH REQUIRING UNDERCUT X 6" DEPTH INCREMENTS TO THE DEPTH REQUIRED.
4. CLASS I EMBEDMENT SHALL BE NCDOT STANDARD # 67 STONE OR APPROVED EQUAL. FOUNDATION STONE SHALL BE NCDOT STANDARD # 57 OR # 67 STONE OR APPROVED EQUAL.

TYPICAL GRAVITY SEWER TRENCHING DETAILS

REVISION DATE - NOVEMBER 3, 2008



STANDARD EXCAVATION

NOTE:
BELL HOLES NOT SHOWN

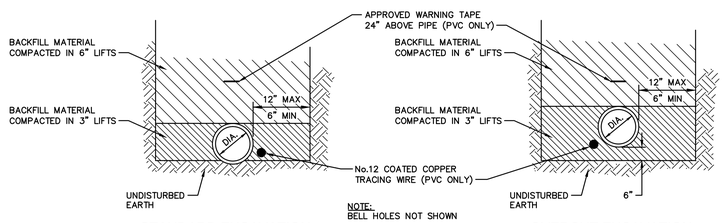
OVERCUT EXCAVATION

NOTE:
1. CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.
2. NO ADDITIONAL PAYMENT FOR ROCK EXCAVATION WILL BE MADE.
3. PAYMENT FOR SELECT BACKFILL IN TRENCH SHALL BE FOR ACTUAL QUANTITIES AND SHALL NOT EXCEED THE WIDTH OF TRENCH SHOWN ON THIS DETAIL.

TYPICAL TRENCHING DETAILS

SEWER FORCE MAIN

REVISION DATE - NOVEMBER 3, 2008



STANDARD EXCAVATION

NOTE:
BELL HOLES NOT SHOWN

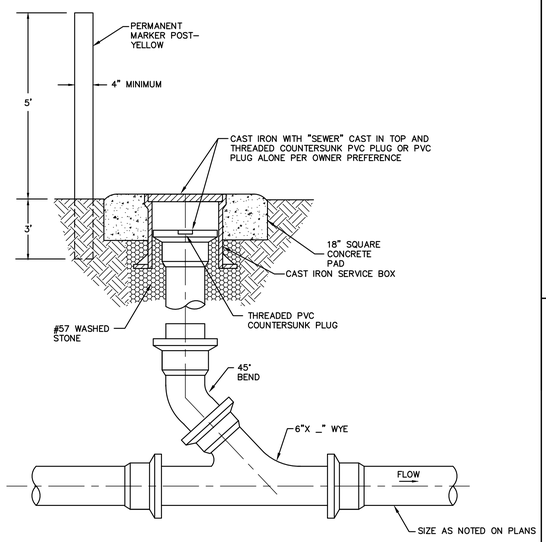
OVERCUT EXCAVATION

NOTE:
1. CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.
2. NO ADDITIONAL PAYMENT FOR ROCK EXCAVATION WILL BE MADE.
3. PAYMENT FOR SELECT BACKFILL IN TRENCH SHALL BE FOR ACTUAL QUANTITIES AND SHALL NOT EXCEED THE WIDTH OF TRENCH SHOWN ON THIS DETAIL.

TYPICAL TRENCHING DETAILS

WATER LINES

REVISION DATE - NOVEMBER 3, 2008



CLEANOUT DETAIL

REVISION DATE - NOVEMBER 3, 2008

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034428 ENGINEER BEN T. CATHEY

NOTE:
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McGill Associates
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DAP, KS
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DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-501, C-510 Miscellaneous Details.dwg

MISCELLANEOUS DETAILS

SHEET
C-504

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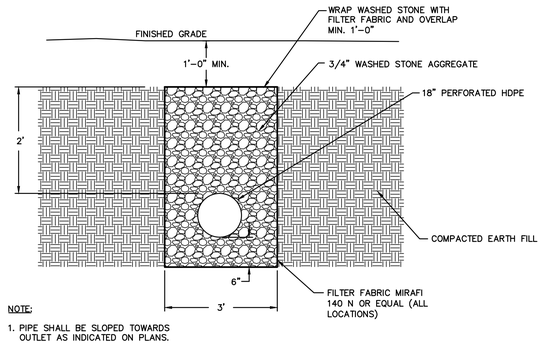
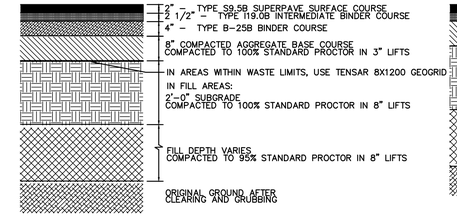
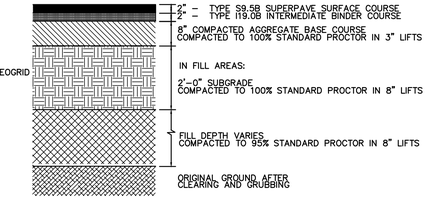


NOTE:
1. PIPE SHALL BE SLOPED TOWARDS OUTLET AS INDICATED ON PLANS.

UNDERDRAIN IN AREA OF CLOSED TVA CAP REPAIR

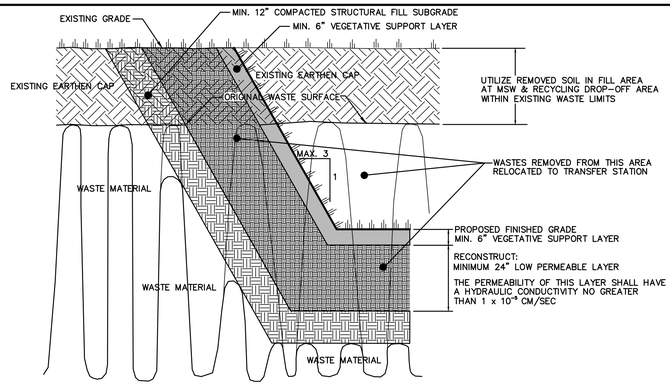


SCALE AREA ACCESS ROAD, MSW RECYCLING DROP–OFF, CONSTRUCTION/DEMOLITION DROP–OFF



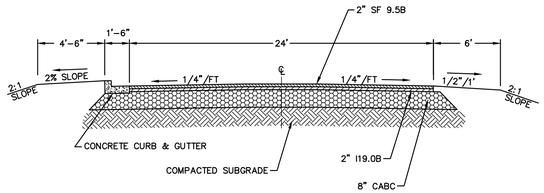
CONVENIENCE CENTER AREA ACCESS ROAD

TYPICAL NEW ASPHALT PAVEMENT CROSS-SECTION



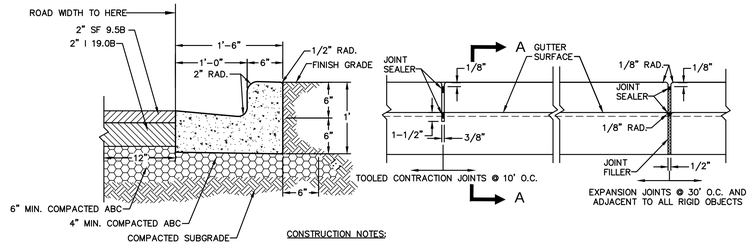
CAP RECONSTRUCTION IN NON-PAVED AREAS DETAIL

NTS



TYPICAL CONVENIENCE CENTER ROAD CROSS-SECTION WITH CURB & GUTTER

NOT TO SCALE



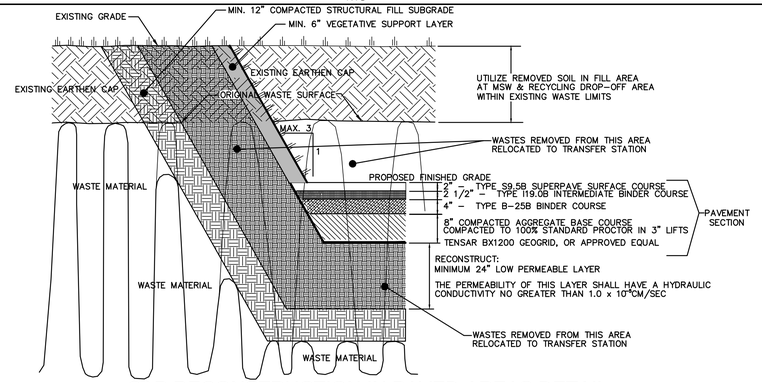
SECTION A-A

CONSTRUCTION NOTES:

1. CURB SHALL BE CONSTRUCTED WITH CLASS B 4000 psi CONCRETE.
2. SURFACE SHALL BE GIVEN A LIGHT BROOM FINISH WITH THE BRUSH MARKS PARALLEL TO THE CURB.
3. FILL AND SEAL THE TOP 1/2" OF EXPANSION JOINTS AND TOP 1" OF CONTRACTION JOINTS WITH APPROVED JOINT SEALING COMPOUND.
4. REFERENCE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, SECTION 846-3.
5. SEE PLANS FOR LOCATION OF CURB & GUTTER.

CONCRETE CURB & GUTTER (1'-6")

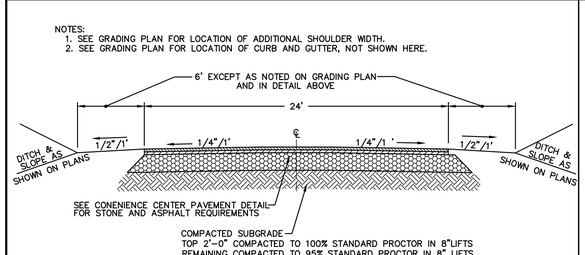
NOT TO SCALE
REVISION DATE - NOVEMBER 3, 2008



CAP RECONSTRUCTION IN PAVED AREAS DETAIL

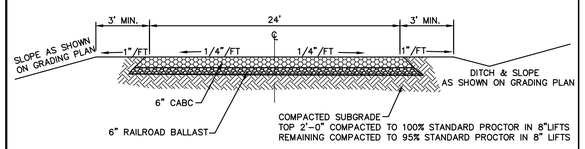
NTS

NOTES:
1. SEE GRADING PLAN FOR LOCATION OF ADDITIONAL SHOULDER WIDTH.
2. SEE GRADING PLAN FOR LOCATION OF CURB AND GUTTER, NOT SHOWN HERE.



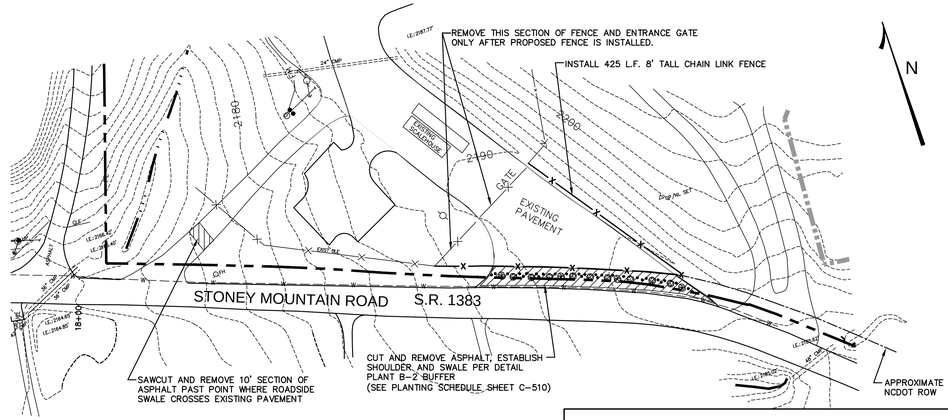
TYPICAL CONVENIENCE CENTER ROAD CROSS-SECTION

NOT TO SCALE



TYPICAL GRAVEL ROAD CROSS-SECTION

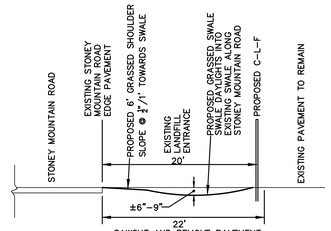
NOT TO SCALE



NOTE: BEFORE EXISTING LANDFILL ENTRANCE CAN BE ABANDONED, ALL PROPOSED FACILITIES AND ROADWAYS AT THE SCALEHOUSE AND CONVENIENCE CENTER MUST BE FULLY CONSTRUCTED AND FULLY OPERATIONAL. EXISTING LANDFILL ENTRANCE CAN BE ABANDONED ONLY WITH APPROVAL OF OWNER AND ENGINEER.

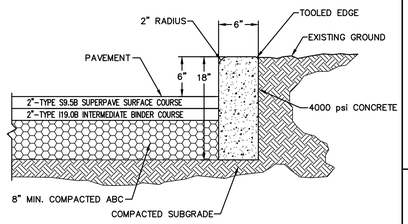
DRIVEWAY ABANDONMENT DETAIL

NTS



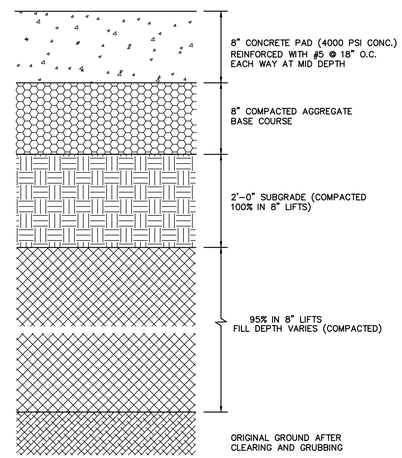
DRIVEWAY ABANDONMENT AT EXISTING LANDFILL ENTRANCE

NTS



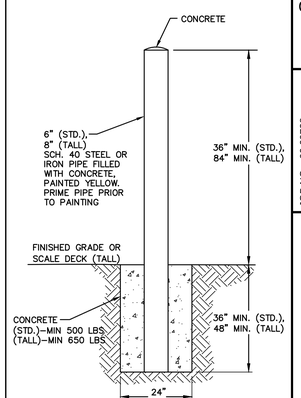
STAND-UP CONCRETE CURB

NOT TO SCALE



CONCRETE PAVING SECTION

NOTE:
FOR STD. BOLLARD, USE MIN. 500 LBS CONCRETE. FOR TALL BOLLARD, USE MIN 650 LBS CONCRETE



BOLLARD DETAIL

REVISED AUGUST, 2010 FOR THIS PROJECT

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By _____ Date 1/25/13

NORTH CAROLINA PROFESSIONAL SEAL 034439 ENGINEER BEN T. CATHEY

McGill Associates
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
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DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-501, C-510 Miscellaneous Details.dwg

MISCELLANEOUS DETAILS

SHEET
C-505

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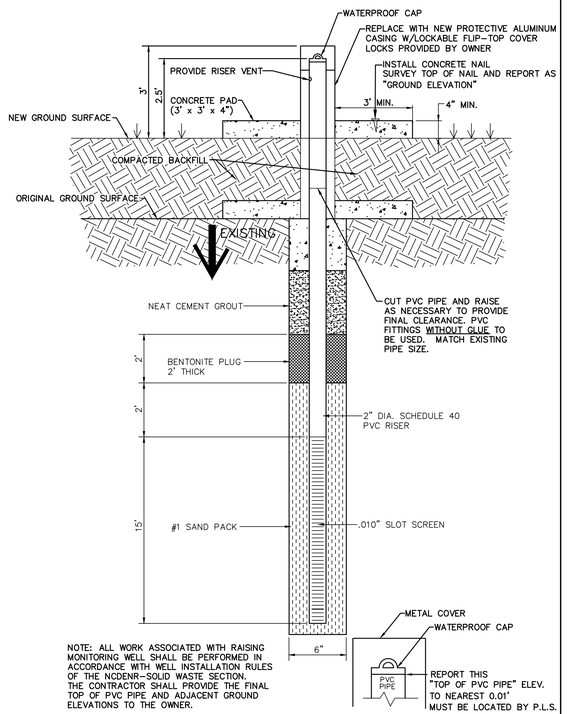
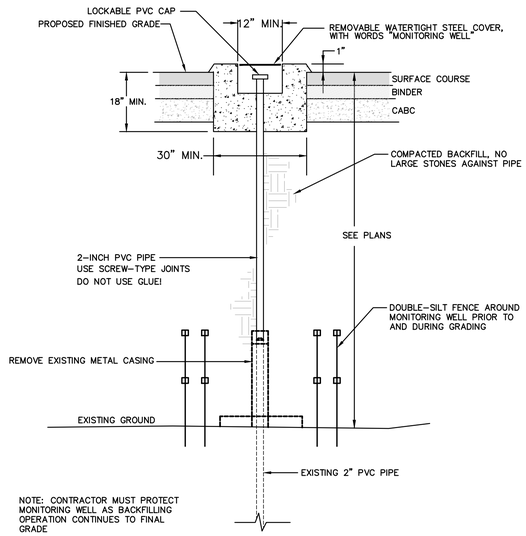


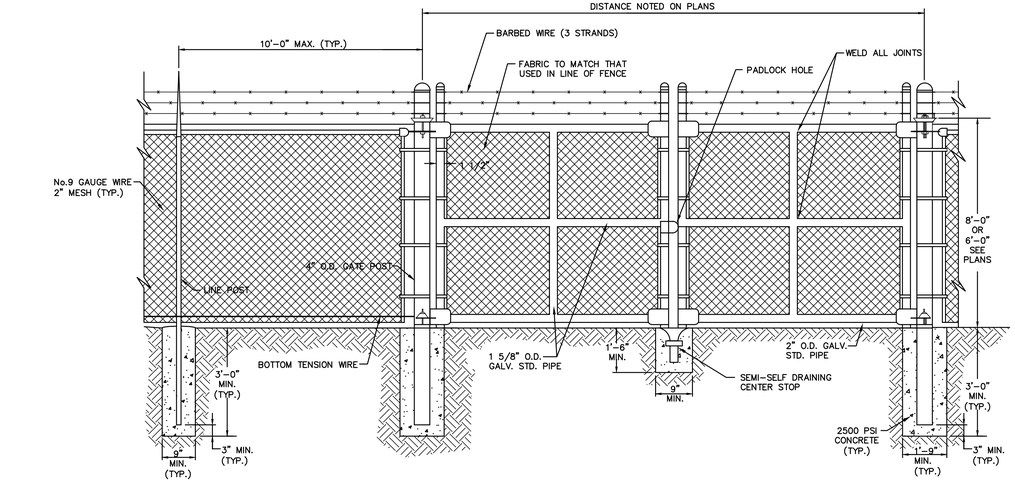
NOTE: ALL WORK ASSOCIATED WITH RAISING MONITORING WELL SHALL BE PERFORMED IN ACCORDANCE WITH WELL INSTALLATION RULES OF THE NCDENR-SOLID WASTE SECTION. THE CONTRACTOR SHALL PROVIDE THE FINAL TOP OF PVC PIPE AND ADJACENT GROUND ELEVATIONS TO THE OWNER.

MONITORING WELL RAISING DETAIL
N.T.S.



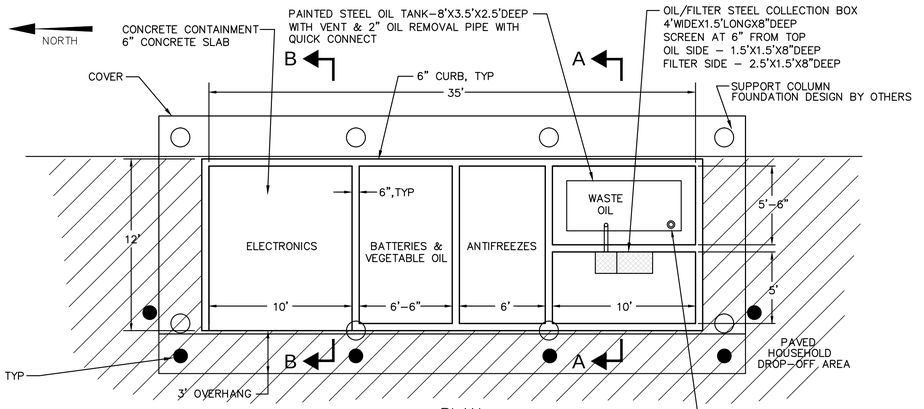
NOTE: CONTRACTOR MUST PROTECT MONITORING WELL AS BACKFILLING OPERATION CONTINUES TO FINAL GRADE

MONITORING WELL RAISING DETAIL IN PAVED AREAS
N.T.S.

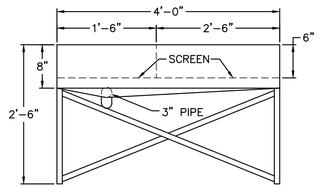


NOTE: THE LOCATION OF THE CHAIN LINK FENCING SHALL BE VERIFIED IN THE FIELD AND MUST BE APPROVED BY THE OWNER.

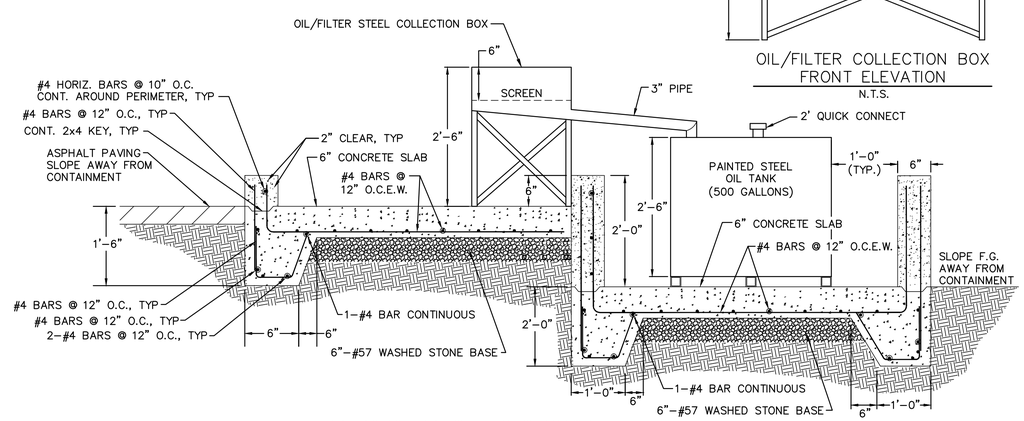
CHAIN LINK FENCE AND DOUBLE GATE DETAIL
N.T.S.



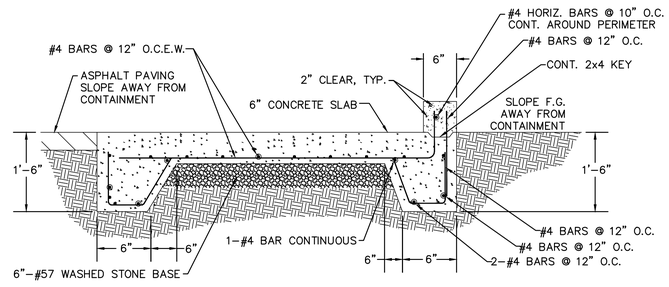
PLAN
N.T.S.



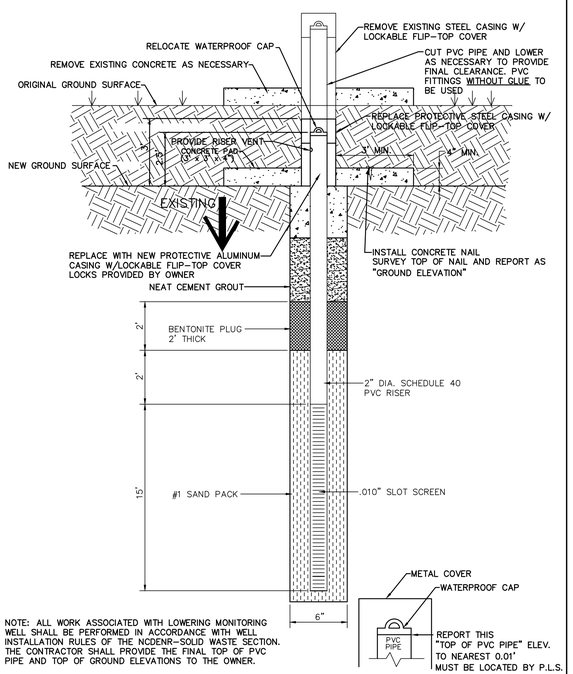
OIL/FILTER COLLECTION BOX FRONT ELEVATION
N.T.S.



CONCRETE CONTAINMENT SECTION A-A
N.T.S.

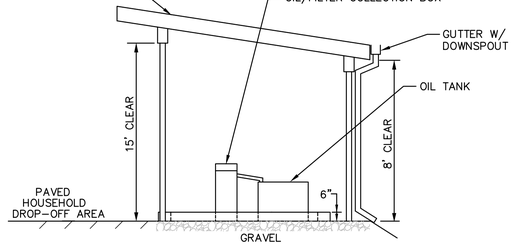


CONCRETE CONTAINMENT SECTION B-B
N.T.S.



NOTE: ALL WORK ASSOCIATED WITH LOWERING MONITORING WELL SHALL BE PERFORMED IN ACCORDANCE WITH WELL INSTALLATION RULES OF THE NCDENR-SOLID WASTE SECTION. THE CONTRACTOR SHALL PROVIDE THE FINAL TOP OF PVC PIPE AND TOP OF GROUND ELEVATIONS TO THE OWNER.

MONITORING WELL LOWERING DETAIL
N.T.S.



ELEVATION
N.T.S.

NOTE:

CONTRACTOR TO PROVIDE DESIGN AND BUILDING INSPECTION APPROVAL FOR METAL SHED BUILDING

RECYCLE COLLECTION SHED
N.T.S.

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034439 ENGINEER BRYAN T. CATHEY

McGill ASSOCIATES
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MISCELLANEOUS DETAILS

SHEET
C-506

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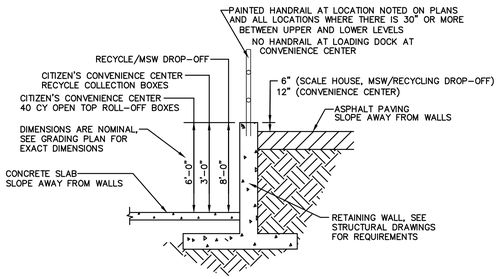
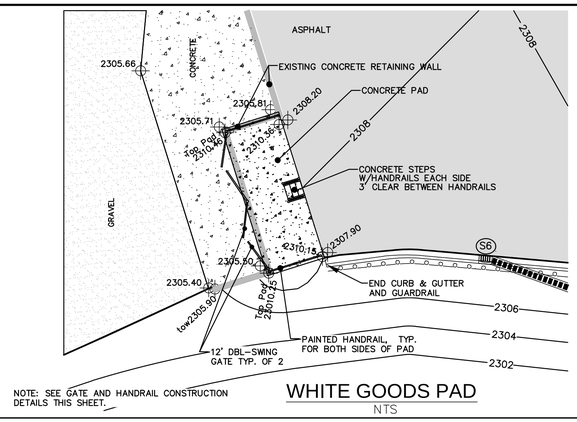


RETAINING WALL DETAIL

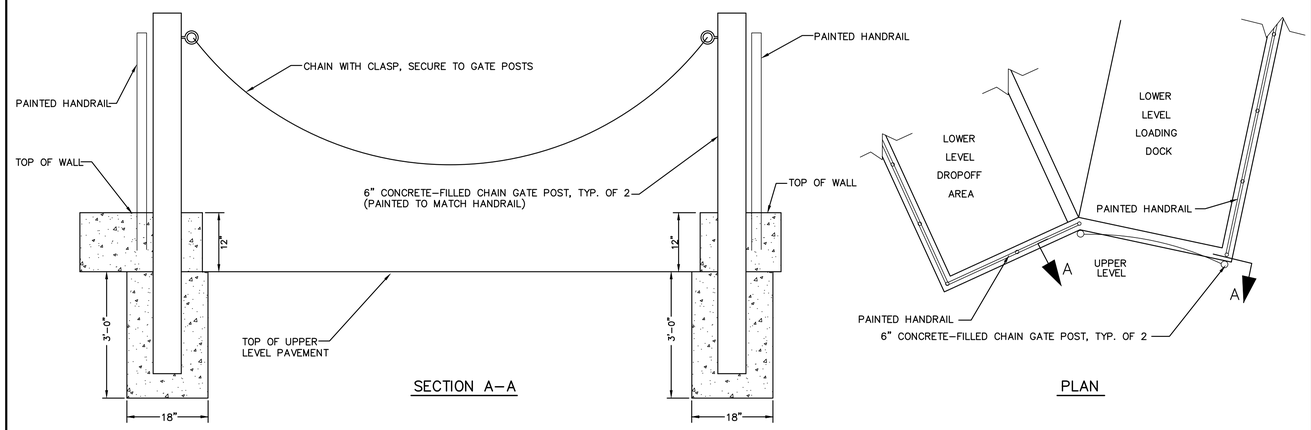
NTS



NOTE: SEE GATE AND HANDRAIL CONSTRUCTION DETAILS THIS SHEET.

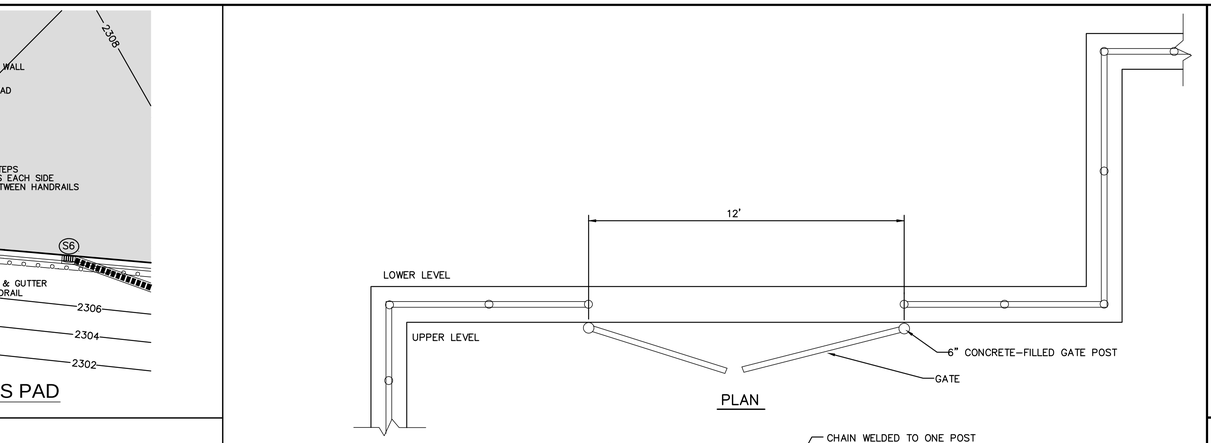
WHITE GOODS PAD

NTS



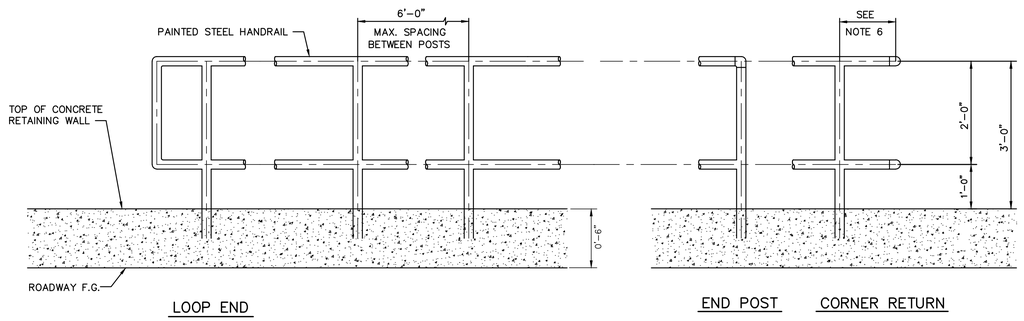
CHAIN GATE AT CONVENIENCE CENTER LOADING DOCK RETAINING WALL

N.T.S.



TYPICAL HANDRAIL GATE @ MSW/RECYCING AREA RETAINING WALL

N.T.S.

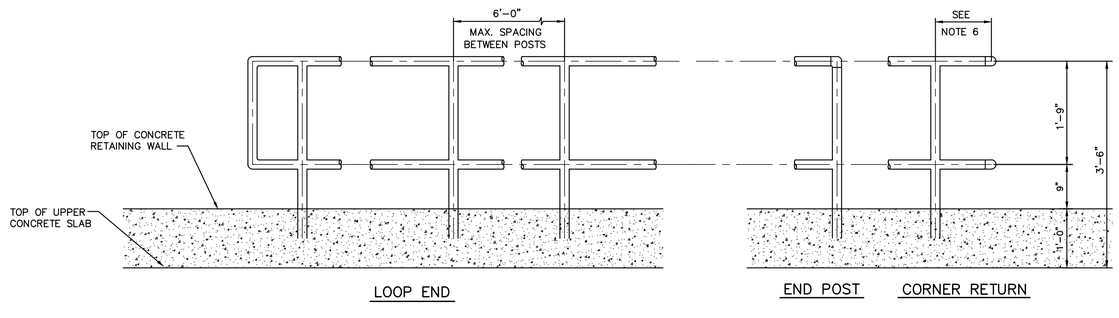


TYPICAL HANDRAIL @ SCALE HOUSE RETAINING WALL

N.T.S.

NOTES:

1. Handrail shall be the product of a company normally engaged in the manufacture of pipe railing. Railing shall be shop assembled in lengths not to exceed 24 feet for field erection.
2. Handrails and stair rails shall be designed to withstand a 200# concentrated load applied in any direction at any point on the top rail. Handrails and stair rails shall also be designed to withstand a load of 50#/ft applied horizontally to the top rail. The 200# load will not be applied simultaneously with the 50#/ft load. In addition, the handrails shall be designed to withstand a load of 100#/ft applied vertically downward to the top rail and simultaneously with the 50#/ft horizontal load. The 100#/ft vertical load does not apply to stair rails.
3. The manufacturer shall submit calculations to the Engineer for approval.
4. Post spacing shall be a maximum of 6'-0". The handrail manufacturer shall show that their posts are of adequate strength to meet the loading requirements. If the manufacturer's posts are not of adequate strength, the manufacturer may reduce the post spacing or add reinforcing dowels or may do both in order to meet loading requirements.
5. Posts shall not interrupt the continuation of the top rail at any point along the railing, including corners and end terminations (OSHA 1910.23). The top surface of the top railing shall be smooth and shall not be interrupted by projecting fittings.
6. The midrail at a corner return shall be able to withstand a 200# load without loosening. The manufacturer is to determine this dimension for their system. Provide physical tests from a laboratory to confirm compliance.



TYPICAL HANDRAIL @ CONVENIENCE CENTER DROP-OFF AREA RETAINING WALL

N.T.S.

NOTE:
FINAL ELEVATIONS SHOWN HAVE NOT BEEN FIELD VERIFIED

RECORD DRAWING

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By _____ Date 1/28/13

NORTH CAROLINA PROFESSIONAL SEAL 034428 ENGINEER BEN T. CATHEY

McGill Associates
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DAP, KS
CADD BY: DAP, KS
DESIGN REVIEW: JRB
CONST. REVIEW: JMKW
FILE NAME: RD-09.00728 C-501, C-510 Miscellaneous Details.dwg

MISCELLANEOUS DETAILS

SHEET
C-507

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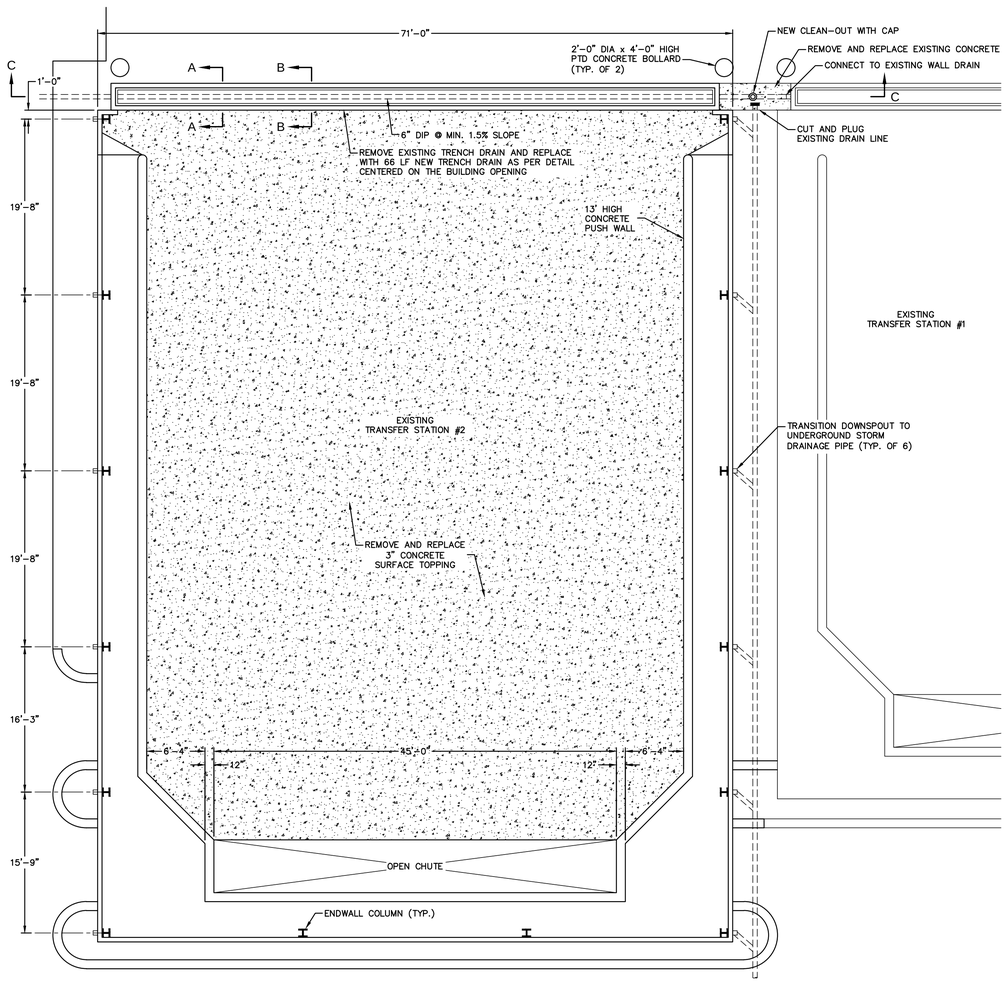
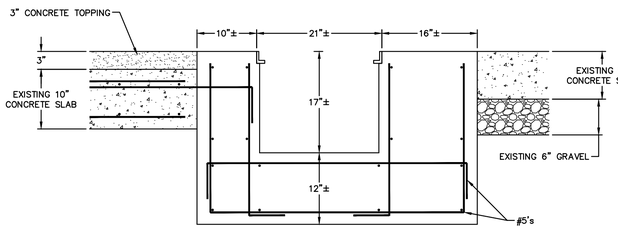
TIPPING FLOOR REPAIR NOTES: – BASE BID

1. TRENCH DRAIN AND EXISTING SURFACE TOPPING TO BE REMOVED AND STRUCTURAL SLAB PREPARATION WORK TO BE PERFORMED PRIOR TO CONSTRUCTING PROPOSED IMPROVEMENTS.
2. DEMOLITION SHALL BE ACCOMPLISHED USING A MECHANICAL SCRABBLER, SHOTBLASTER OR MILLING MACHINE. THE USE OF HAND HELD/HAND OPERATED JACKHAMMERS WILL BE ALLOWED WITHIN TWO FEET (2') OF THE EXISTING CONCRETE PUSH WALLS AND THE OPEN FLOOR CHUTE. EQUIPMENT MOUNTED AIR OR HYDRAULICALLY OPERATED HOE RAMS WILL NOT BE ALLOWED. REMOVE THE EXISTING SURFACE TOPPING TO THE UNDERLYING STRUCTURAL SLAB. CARE SHOULD BE TAKEN NOT TO DAMAGE THE EXISTING CONCRETE PUSH WALLS, METAL EDGE PLATES AT THE CHUTE OPENING OR THE NEWLY INSTALLED TRENCH DRAIN. ANY STRUCTURAL DAMAGE RESULTING FROM THE USE OF JACKHAMMERS MUST BE REPAIRED IN A MANNER APPROVED BY THE ENGINEER.
3. AFTER DEMOLITION THE EXPOSED SURFACE SHALL BE THOROUGHLY CLEANED BY WATER BLASTING OR SANDBLASTING TO REMOVE ALL LOOSE OR WEAKENED MATERIAL. THE UNDERLYING STRUCTURAL SLAB WILL BE THOROUGHLY INSPECTED FOR ANY DAMAGE BY THE ENGINEER. IF REQUIRED BY THE ENGINEER THE CONTRACTOR WILL REPAIR NOTED IMPERFECTIONS IN THE STRUCTURAL SLAB RESULTING FROM DEMOLITION/REMOVAL OF THE EXISTING 3" SACRIFICIAL SLAB PRIOR TO PLACING THE BOND BREAKER. REPAIR PRODUCT WILL BE APPROVED THROUGH THE SUBMITTAL PROCESS.
4. ONCE THE SURFACE OF THE UNDERLYING STRUCTURAL SLAB HAS BEEN PREPARED, PLACE A BOND BREAKER BY (MASTER BUILDERS), OR APPROVED EQUAL, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.
5. PLACE A MINIMUM OF 4" THICK CONCRETE SLAB WITH A UNIFORM SLOPE FROM THE PUSH PIT (CHUTE OPENING) TO THE ENTRANCE TRENCH DRAIN. CONCRETE SHALL BE 5,000 PSI CONCRETE WITH A MINIMUM OF 70 POUNDS PER CUBIC YARD OF NOVOCON XR STEEL FIBER, WITH A MINIMUM FIBER LENGTH OF 1.5", AS MANUFACTURED BY PROPEX CONCRETE SYSTEMS CORP OR APPROVED EQUAL. STEEL FIBERS TO BE ADDED TO AND DISPERSED UNIFORMLY THROUGHOUT THE CONCRETE MIX IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONCRETE SHALL HAVE A SMOOTH SURFACE FINISH. NO MECHANICAL FINISHING EQUIPMENT WILL BE PERMITTED, FLOAT FINISH ONLY.
6. ONCE THE NEW CONCRETE SURFACE TOPPING HAS INITIALLY SET, SAW CUT EXPANSION JOINTS IN THE SAME LOCATION AS THE EXPANSION JOINTS IN THE UNDERLYING STRUCTURAL SLAB. CONTRACTOR TO CAREFULLY MEASURE AND DOCUMENT THE LOCATION OF EXPANSION JOINTS IN THE STRUCTURAL SLAB. SAW CUT JOINTS ARE TO BE CLEANED AND FILLED TO WITHIN 1/4" BELOW THE SURFACE WITH A SEMI–RIGID TWO–COMPONENT POLYUREA CONTROL JOINT FILLER, (JOINT TITE 750) BY L&M CONSTRUCTION CHEMICALS, INC., OR APPROVED EQUAL.
7. AFTER INITIAL SET, MOIST CURE FOR A MINIMUM OF SEVEN (7) DAYS USING SPRINKLERS, BURLAP OR OTHER TYPE BLANKET COVERINGS, AND/OR SOAKER HOSES.
8. NEW CONCRETE SHALL BE OPEN TO TRAFFIC NO EARLIER THAN FOURTEEN (14) DAYS AFTER INITIAL SET.
9. CONTRACTOR TO BEGIN WORK ASSOCIATED WITH TRANSFER STATION NO. 2 REPAIRS/IMPROVEMENTS ONCE THE WORK ASSOCIATED WITH THE CITIZEN'S CONVENIENCE CENTER WITH ACCESS ROAD AND ALL UTILITIES AND APPURTENANCES ASSOCIATED WITH THIS WORK AREA, RECYCLING AND MSW DROP–OFF AREA AND THE C&D DROP–OFF AREA ARE COMPLETE AND IN OPERATION.
10. CONTRACTOR TO COMPLETE ALL WORK ASSOCIATED WITH THE REPAIRS/IMPROVEMENTS TO TRANSFER STATION NO. 2 WITHIN 30 CALENDAR DAYS ONCE WORK COMMENCES; HOWEVER, ALL WORK SHOULD BE COMPLETED WITHIN 365 CALENDAR DAYS AFTER NOTICE TO PROCEED.



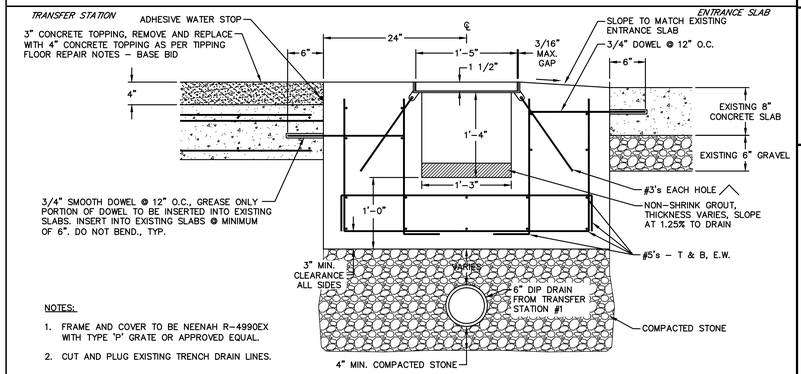
TRANSFER STATION MODIFICATION PLAN

NOT TO SCALE



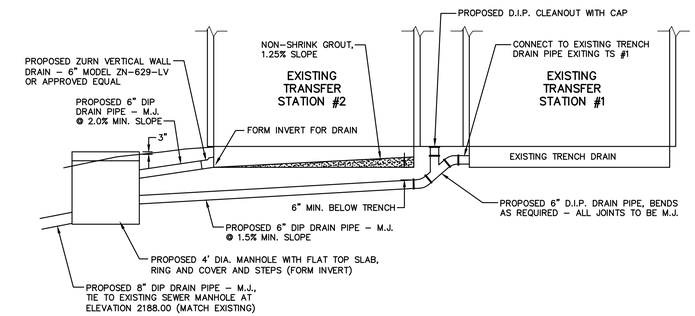
EXISTING TRENCH DRAIN SECTION A-A

NOT TO SCALE



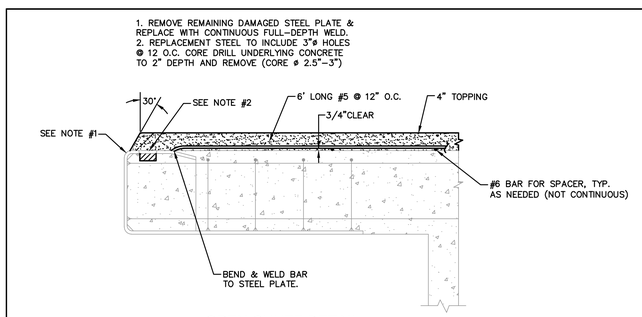
PROPOSED TRENCH DRAIN SECTION B-B - BASE BID

NOT TO SCALE



SECTION C-C

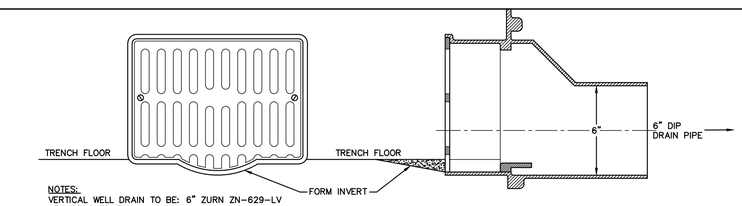
NOT TO SCALE



OPEN CHUTE DETAIL

NOT TO SCALE

NOTE: ORIGINAL DESIGN WAS DONE BY CDM ON FEB. 22, 2006. MCGILL ASSOCIATES CONSTRUCTION PLANS WERE FOR REPAIRING DAMAGED ARMORING PLATES. ADDITION OF REBAR IN THE REAR OF THE SLAB WAS A PART OF THIS CONTRACT.



VERTICAL WALL DRAIN DETAIL

NOT TO SCALE

RECORD DRAWING

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By _____ Date 1/28/13

NOTE:
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NORTH CAROLINA PROFESSIONAL SEAL 034328 ENGINEER BRENT CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
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DESIGNED BY: DAP, KS
CADD BY: DAP, KS
DESIGN REVIEW: JRB
CONST. REVIEW: MKW
FILE NAME: RD-09.00728 C-501, C-510 Miscellaneous Details.dwg

MISCELLANEOUS DETAILS

SHEET
C-508

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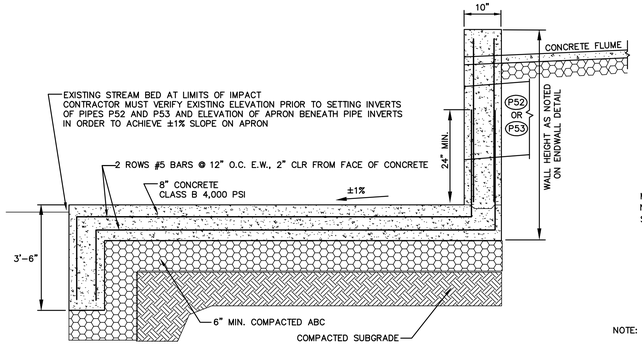
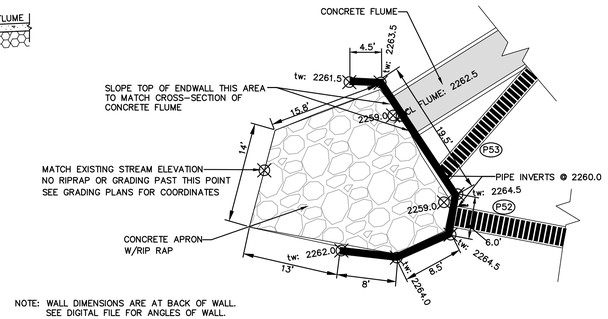


CONCRETE APRON DETAIL

NOT TO SCALE



NOTE: WALL DIMENSIONS ARE AT BACK OF WALL. SEE DIGITAL FILE FOR ANGLES OF WALL.

ENDWALL 1 DETAIL

NOT TO SCALE

NOTE:
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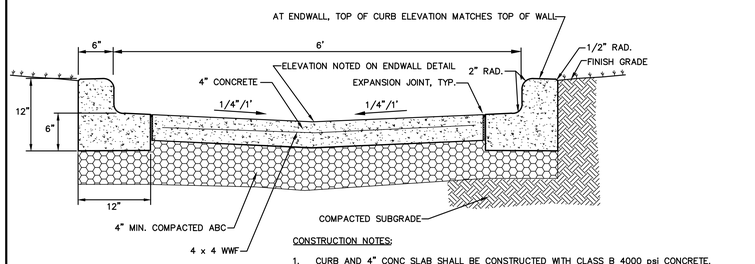
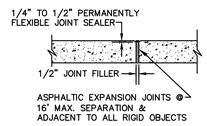


CONSTRUCTION NOTES:

1. CURB AND 4" CONC SLAB SHALL BE CONSTRUCTED WITH CLASS B 4000 psi CONCRETE.
2. EXPANSION JOINTS MAX. 16' O.C.
3. FILL AND SEAL THE TOP 1/2" OF EXPANSION JOINTS WITH APPROVED JOINT SEALING COMPOUND.

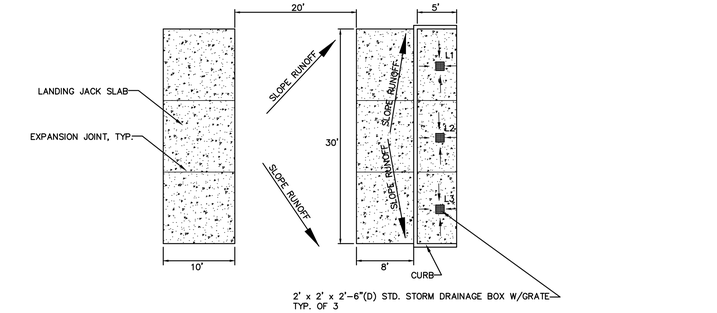
CONCRETE FLUME DETAIL

NOT TO SCALE



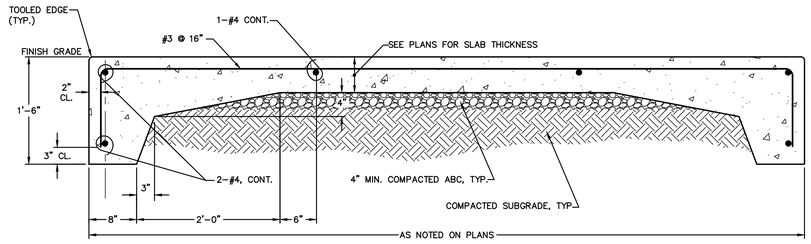
EXPANSION JOINTS

NOT TO SCALE



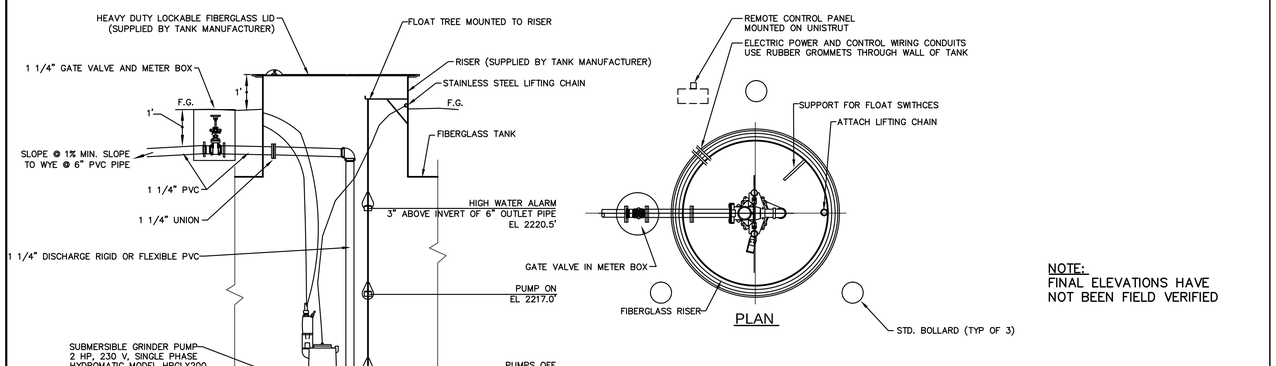
TRAILER STAGING AREA

NOT TO SCALE



TYPICAL SLAB DETAIL

NOT TO SCALE



SECTION AT PUMP ACCESS RISER

PLAN

NOTE:
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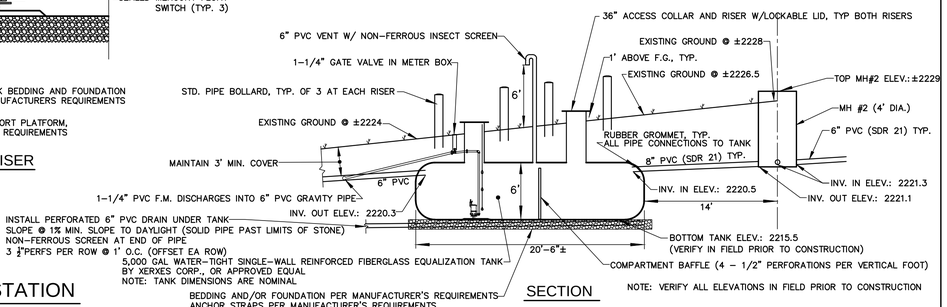


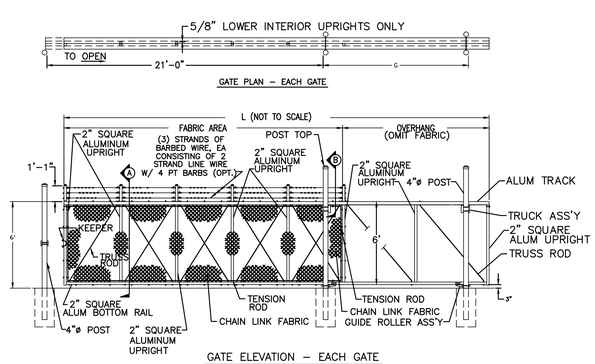
SECTION

NOTE: VERIFY ALL ELEVATIONS IN FIELD PRIOR TO CONSTRUCTION

NOTE: REGRADE AREA ABOVE TANK IF NECESSARY TO ENSURE LESS THAN 6' OF COVER OVER ANY PART OF THE TANK.

EQUALIZATION TANK/PUMP STATION

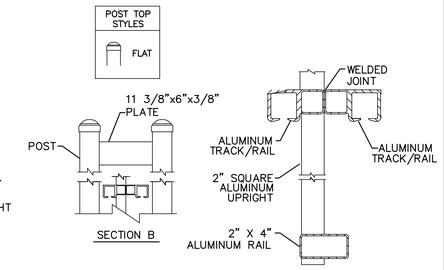
NOT TO SCALE



NOTES:

1. SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
2. FOOTING WIDTH TO BE (4)X POST WIDTH.
3. EACH GATE SHALL EXTEND TO THE MIDDLE OF THE PAVED ENTRANCE ROAD.
4. VERTICAL SUPPORT COLUMNS PER MANUFACTURER'S DESIGN.
5. CHAIN LINK FENCING NOT REQUIRED ON OVERHANG.

DOUBLE SLIDE GATE - MANUALLY OPERATED
(ONLY ONE SIDE SHOWN)



NOTE:
GATE IS A MERCHANTS METALS SINGLE CANTILEVERED SLIDING GATE OR APPROVED EQUAL

OPENING EACH GATE	LENGTH (L) EACH GATE	GATE POSTS (G)
I/S POST FACE TO I/S POST FACE	O/S DIM OF GATE LEAF	O/S POST FACE TO O/S POST FACE
21'–0"	32'–4"	10'–0"

RECORD DRAWING

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By _____ Date 1/28/13

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STONEY MOUNTAIN ROAD LANDFILL
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SHEET
C-509

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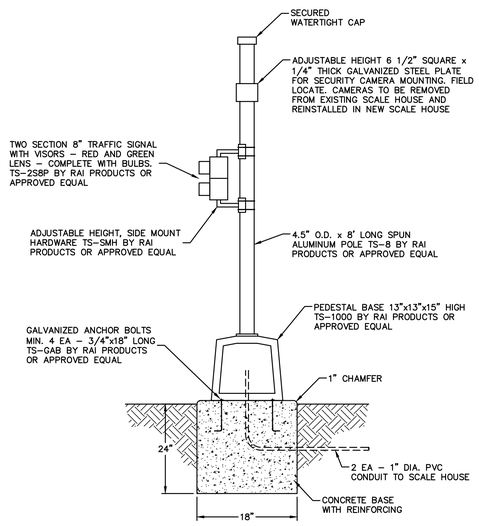
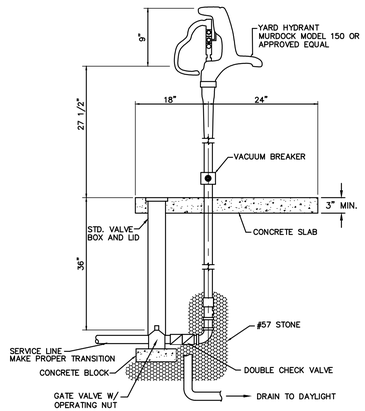


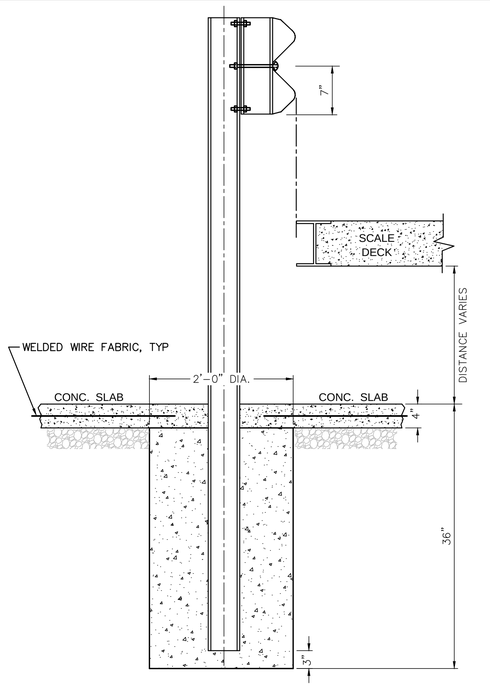
SCALE ACCESS TRAFFIC SIGNAL

N.T.S.



YARD HYDRANT DETAIL

N.T.S.



TALL GUARDRAIL AT SCALE

N.T.S.

NOTES:
1. GUARDRAIL INSTALLATION PER NCDOT STANDARD DETAIL 862.02, EXCEPT AS SHOWN IN THIS DETAIL.
2. FOR ALL GUARDRAIL AT SCALE HOUSE, USE TERMINAL END SECTION PER NCDOT DETAIL 862.02, SHEET 9 OF 10.

CONVENIENCE CENTER AREA TREES AND SHRUBS

TYPE	SPECIES	COMMON NAME	TOTAL #	CALIPER	HEIGHT	CONTAINER
LARGE DECIDUOUS	*Acer rubrum*	RED MAPLE	14	2" MIN. CALIPER	12' – 14'	B&B
SMALL DECIDUOUS	*Cercis canadensis*	REDBUD	10	1.5" MIN. CALIPER	6' – 8'	B&B or CONTAINER
LARGE EVERGREEN	*Cupressocyparis leyandii*	LEYLAND CYPRESS	25	2.5" MIN. CALIPER	12' – 14'	B&B
SMALL EVERGREEN	*Prunus laurocerasus 'Otto Luyken'* *'Schipkaensis'*	LAUREL	10 10	1" MIN. CALIPER	3' – 5'	B&B or CONTAINER

SCALE ACCESS ROAD TREES AND SHRUBS

	SPECIES	COMMON NAME	TOTAL #	CALIPER	HEIGHT	CONTAINER
LARGE EVERGREEN	*Cupressocyparis leyandii*	LEYLAND CYPRESS	15	2.5" MIN. CALIPER	12' – 14'	B&B

CLOSED EXISTING SCALE HOUSE ACCESS ROAD

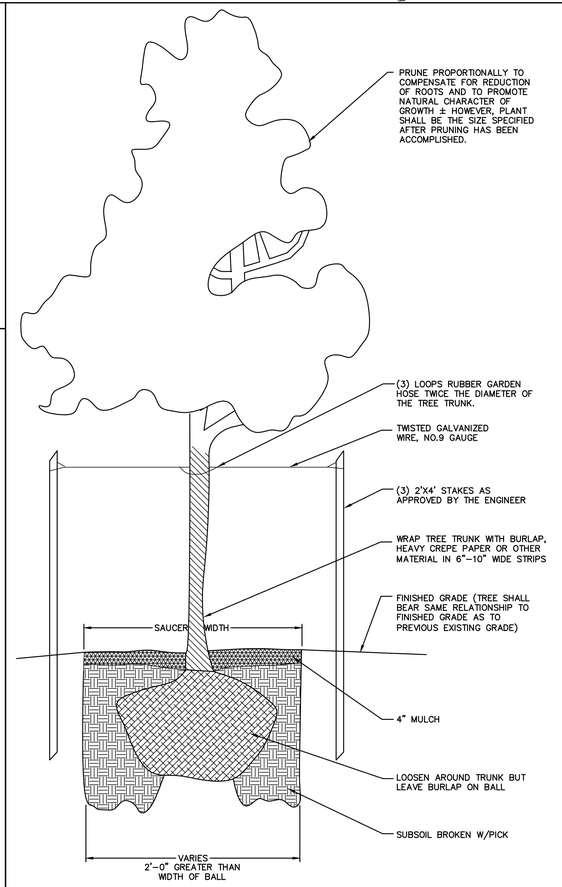
TYPE	SPECIES	COMMON NAME	TOTAL #	CALIPER	HEIGHT	CONTAINER
LARGE DECIDUOUS	*Acer rubrum*	RED MAPLE	4	2" MIN. CALIPER	12' – 14'	B&B
SMALL DECIDUOUS	*Cercis canadensis*	REDBUD	6	1.5" MIN. CALIPER	6' – 8'	B&B or CONTAINER
LARGE EVERGREEN	*Cupressocyparis leyandii*	LEYLAND CYPRESS	9	2.5" MIN. CALIPER	12' – 14'	B&B
SMALL EVERGREEN	*Prunus laurocerasus 'Otto Luyken'* *'Schipkaensis'*	LAUREL	11 11	1" MIN. CALIPER	3' – 5'	B&B or CONTAINER

LANDSCAPING DETAILS

DECIDUOUS, LARGE & SMALL

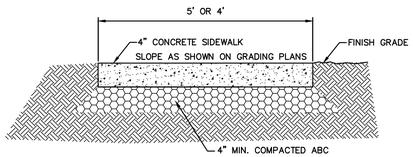
EVERGREEN, LARGE & SMALL

NOTE: SEE ALSO TYPICAL TREE PLANTING DETAIL

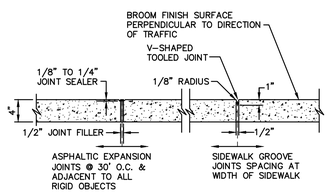


TYPICAL TREE PLANTING DETAIL

REVISION DATE - NOVEMBER 3, 2008



SECTION B-B



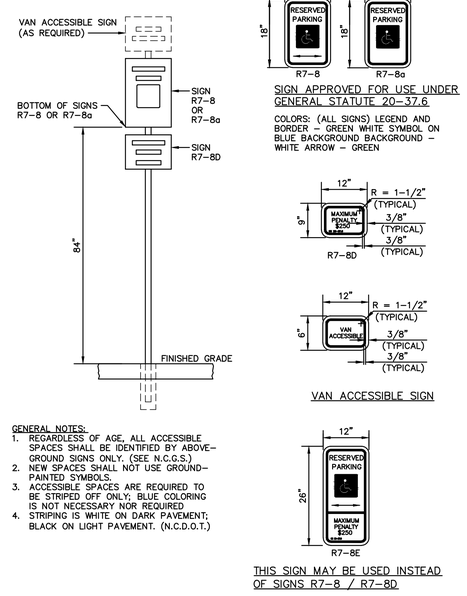
SECTION A-A

CONSTRUCTION NOTES:

1. SIDEWALK SHALL BE CONSTRUCTED WITH CLASS B 4000 PSI CONCRETE.

CONCRETE SIDEWALK

N.T.S.



GENERAL NOTES:
1. REGARDLESS OF AGE, ALL ACCESSIBLE SPACES SHALL BE IDENTIFIED BY ABOVE–GROUND SIGNS ONLY. (SEE N.C.G.S.)
2. NEW SPACES SHALL NOT USE GROUND–PAINTED SYMBOLS.
3. ACCESSIBLE SPACES ARE REQUIRED TO BE STRIPED OFF ONLY; BLUE COLORING IS NOT NECESSARY NOR REQUIRED
4. STRIPING IS WHITE ON DARK PAVEMENT; BLACK ON LIGHT PAVEMENT. (N.C.D.O.T.)

SIGN MOUNTING HEIGHT

NOT TO SCALE

REVISION DATE - NOVEMBER 3, 2008

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By _____ Date 1/23/13

NORTH CAROLINA PROFESSIONAL SEAL 034439 ENGINEER BRIAN T. CATHEY

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST, 2010
DESIGNED BY: DAP, KS
CADD BY: DAP, KS
DESIGN REVIEW: JRB
CONST. REVIEW: JMCV
FILE NAME: RD-09.00728 C-501, C-510 Miscellaneous Details.dwg

MISCELLANEOUS DETAILS

SHEET
C-510

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LIGHTING MOUNTING AS NOTED

SYMBOL	DESCRIPTION
	CEILING MOUNTED FLUORESCENT FIXTURE; LETTER INSIDE OR BESIDE DENOTES FIXTURE TYPE
	CEILING MOUNTED FLUORESCENT LIGHTING FIXTURE, WIRED FOR NORMAL/STANDBY POWER OPERATION; LETTER INSIDE OR BESIDE FIXTURE DENOTES FIXTURE TYPE
	WALL MOUNTED FLUORESCENT FIXTURE
	CEILING MOUNTED INCANDESCENT OR H.I.D. FIXTURE
	WALL MOUNTED INCANDESCENT OR H.I.D. FIXTURE
	POLE STANDARD LIGHT FIXTURE UNIT – SINGLE ARM
	POLE STANDARD LIGHT FIXTURE UNIT – DOUBLE ARM
	POLE LANTERN TYPE LIGHT FIXTURE UNIT
	EXIT SIGN
	EXIT SIGN (DOUBLE FACE)
	EXIT SIGN WITH DIRECTIONAL ARROW
	EMERGENCY BATTERY PACK UNIT
	REMOTE HEAD FOR EMERGENCY BATTERY PACK UNIT

SWITCHING

SYMBOL	MOUNTING	DESCRIPTION
S	48"AFF	SWITCH, SINGLE POLE
S_2	48"AFF	SWITCH, DPDT
S_3	48"AFF	SWITCH, 3–WAY
S_4	48"AFF	SWITCH, 4–WAY
S_{DM}	48"AFF	SWITCH, DIMMER
S_P	48"AFF	SWITCH WITH PILOT LIGHT
S_M	48"AFF	SWITCH, MANUAL MOTOR STARTER, RATING AND THERMAL OVERLOADS TO MATCH MOTOR NAME PLATE DATA
S_{MI}	48"AFF	SWITCH, MANUAL MOTOR STARTER WITH IVORY, ILLUMINATED HANDLE
S_{MP}	48"AFF	SWITCH, MANUAL MOTOR STARTER WITH PILOT LIGHT
S_F	48"AFF	MANUAL MOTOR STARTER SWITCH FRACTIONAL HORSEPOWER
	AS NOTED	PHOTOELECTRIC CONTROL
R1	48"AFF	LIGHTING CONTACTOR (R1 – DESIGNATION)
LC–1		LIGHTING CONTACTOR REMOTE PUSH–BUTTON "ON–OFF" CONTROL (LC–1 – REPRESENTS LIGHTING CONTACTOR BEING CONTROLLED)
DS	AS NOTED	DOOR SWITCH
MC	AS NOTED	MOTION CONTROL
M	CEILING	MOTION SENSOR
OS	CEILING	OCCUPATION SENSOR

INTRUSION ALARM SYSTEM

SYMBOL	MOUNTING	DESCRIPTION
D	AS NOTED	INTRUSION ALARM MAGNETIC DOOR CONTACTS
K	48"AFF	INTRUSION ALARM KEY PAD
M	AS NOTED	INTRUSION ALARM MOTION DETECTOR
D EXP	AS NOTED	INTRUSION ALARM MAGNETIC DOOR CONTACTS, EXPLOSION PROOF
	AS NOTED	INTRUSION ALARM BELL
IACP	48"AFF	INTRUSION ALARM CONTROL PANEL

TELECOMMUNICATION

SYMBOL	MOUNTING	DESCRIPTION
AD	AS NOTED	AUTO DIALER
#	36"AFF	PHONE PORT (# = NUMBER OF VOICE PORTS)
#	36"AFF	DATA PORT (# = NUMBER OF DATA PORTS)
# #	36"AFF	COMBINATION DATA/PHONE PORT (# = NUMBER OF DATA PORTS/VOICE PORTS)
#	FLOOR	PHONE PORT– FLOOR BOX–FLUSH (# = NUMBER OF DATA PORTS/VOICE PORTS)

HVAC

SYMBOL	MOUNTING	DESCRIPTION
M	AS NOTED	MOTOR OPERATED DAMPER
	AS NOTED	UNIT HEATER
T	48"AFF	THERMOSTAT; FURNISHED AND INSTALLED UNDER DIVISION 15 WIRED UNDER DIVISION 16

POWER

SYMBOL	MOUNTING	DESCRIPTION
WP C	36"AFF	DUPLEX RECEPTACLE, 20A RATED FOOTNOTE DELINEATES SPECIFIC DEVICE (C – DENOTES MOUNTED 6" ABOVE COUNTERTOP; WP – REQUIREMENT – SEE ABBREVIATIONS)
	36"AFF	SPECIAL PURPOSE OUTLET (SIZE INDICATED ON PLANS)
	36"AFF	SINGLE RECEPTACLE, 20A RATED
	36"AFF	DUPLEX RECEPTACLE–FLUSH–WITH GROUND FAULT CIRCUIT INTERRUPTER
	36"AFF	DOUBLE DUPLEX RECEPTACLE, 20A RATED
	18"AFF	DUPLEX RECEPTACLE–FLUSH – SURGE–PROTECTIVE DEVICE (SPD)
	FLOOR	DUPLEX RECEPTACLE– FLOOR BOX–FLUSH
SPD	FLOOR	DUPLEX RECEPTACLE– FLOOR BOX–FLUSH – SURGE–PROTECTIVE DEVICE (SPD)
SPD	FLOOR	COMBINATION DUPLEX RECEPTACLE (SPD)/VOICE OUTLET PORT– (# DESIGNATES NUMBER OF VOICE PORTS) – FLOOR BOX–FLUSH
MSE	48"AFF	COMBINATION DISCONNECT SWITCH/MOTOR STARTER (MSE – DESIGNATION)
	AS NOTED	MOTOR (HORSEPOWER INDICATED ON PLANS)
	AS NOTED	JUNCTION BOX
T–1		TRANSFORMER (T–1 – DESIGNATION)
CM	AS NOTED	CIRCUIT MONITOR
VR 2	AS NOTED	VOLTAGE REGULATOR
SPD	AS NOTED	SURGE–PROTECTIVE DEVICE
	48"AFF	EMERGENCY POWER SHUT–OFF SWITCH
H	48"AFF	LOCKABLE ON–OFF–AUTO SELECTOR SWITCH W/RED INDICATOR LIGHT
DSA	48"AFF	DISCONNECT SWITCH (DSA – DESIGNATION)
480V 50KVA 120V		TRANSFORMER (480V, 50KVA, 120V – SIZE; VOLTAGES)
		SHIELDED ISOLATION TYPE TRANSFORMER

PANELBOARDS

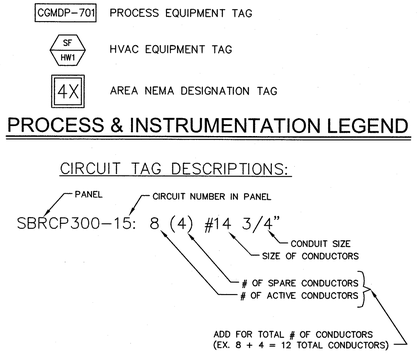
SYMBOL	MOUNTING	DESCRIPTION
	TOP BREAKER 6'–0"AFF	NEW PANELBOARD – SURFACE MOUNTED
	TOP BREAKER 6'–0"AFF	NEW PANELBOARD – FLUSH MOUNTED
	---	EXISTING PANELBOARD – SURFACE MOUNTED
	---	EXISTING PANELBOARD – FLUSH MOUNTED

TYPICAL ANNOTATION

1	DRAWING KEYNOTE
1	DEMOLITION KEYNOTE
1	REVISION TAG
	REVISION CLOUD
AAA ###	INSTRUMENTATION TAG
CGMDP–701	PROCESS EQUIPMENT TAG
SF HW1	HVAC EQUIPMENT TAG
4X	AREA NEMA DESIGNATION TAG

PROCESS & INSTRUMENTATION LEGEND

CIRCUIT TAG DESCRIPTIONS:



NOTES:
1. INSTALL ALL FUSES SO THAT LABELS ARE RIGHT–SIDE UP AND FACING OUTWARD.
2. INSTALL OXIDATION INHIBITING COMPOUND SUCH AS PENETROX IN ALL FUSE CLIPS OF SAFETY SWITCHES LOCATED OUTDOORS OR IN WET ENVIRONMENTS.

SAFETY SWITCH DESIGNATOR

NOT TO SCALE

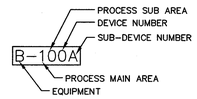
CONDUIT FEEDERS AND BRANCH CIRCUITS

SYMBOL	DESCRIPTION
E E	OVERHEAD ELECTRIC SERVICE
PE PE	OVERHEAD PRIMARY ELECTRIC SERVICE
SE SE	OVERHEAD SECONDARY ELECTRIC SERVICE
T T	OVERHEAD TELEPHONE SERVICE
FO FO	OVERHEAD FIBER OPTIC
CTV CTV	OVERHEAD TELEVISION SERVICE
	CONDUIT – EMBEDDED IN FLOOR OR EARTH
EU	UNDERGROUND ELECTRIC SERVICE
PEU	UNDERGROUND PRIMARY ELECTRIC SERVICE
SEU	UNDERGROUND SECONDARY ELECTRIC SERVICE
TU	UNDERGROUND TELEPHONE SERVICE
FOU	UNDERGROUND FIBER OPTIC
CTVU	UNDERGROUND TELEVISION SERVICE
	CONDUIT – IN WALL, CEILING OR EXPOSED
XX XX	CONDUIT WITH IDENTIFIER
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	CONDUIT CAPPED
	BRANCH CIRCUIT WIRING
	CIRCUIT HOME RUN
1	IN–LINE HOME RUN (1 – CIRCUIT NUMBER)
E E	EMERGENCY ONLY CIRCUIT
NE NE	NORMAL EMERGENCY CIRCUIT
	DEVICES ON SAME CIRCUIT, SEPARATELY CONTROLLED
F2	ELECTRIC FEEDER LEGEND INDICATION

FIRE ALARM SYSTEM

SYMBOL	MOUNTING U.O.N.	DESCRIPTION
FACP	48"AFF	FIRE ALARM CONTROL PANEL
FAA	AS NOTED	FIRE ALARM ANNUNCIATOR
A	AS NOTED	FIRE ALARM AUDIBLE/VISIBLE SIGNAL WALL MOUNTED AT 6'–8" A.F.F. OR 6" BELOW CEILING; WHICHEVER IS LOWER
F	48"AFF	FIRE ALARM MANUAL PULL STATION
S	CEILING	FIRE ALARM SMOKE DETECTOR
H	CEILING	FIRE ALARM HEAT DETECTOR, FIXED TYPE
A EXP	AS NOTED	FIRE ALARM AUDIBLE ALARM, EXPLOSION PROOF WALL MOUNTED AT 6'–8" A.F.F. OR 6" BELOW CEILING; WHICHEVER IS LOWER
V EXP	AS NOTED	FIRE ALARM VISIBLE ALARM, EXPLOSION PROOF, WALL MOUNTED AT 6'–8" A.F.F. OR 6" BELOW CEILING; WHICHEVER IS LOWER
F EXP	48"AFF	FIRE ALARM MANUAL PULL STATION, EXPLOSION PROOF
H EXP	CEILING	FIRE ALARM HEAT DETECTOR, FIXED TYPE, EXPLOSION PROOF
TS	48"AFF	FIRE SUPPRESSION SYSTEM TAMPER SWITCH
FS	48"AFF	FIRE SUPPRESSION SYSTEM FLOW SWITCH
PS	48"AFF	FIRE SUPPRESSION SYSTEM PRESSURE SWITCH

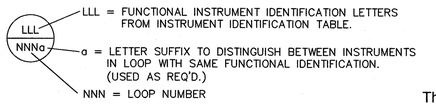
PROCESS EQUIPMENT TAGGING



EQUIPMENT:

AC	AIR COMPRESSOR	MX	MIXER
B	BLOWER	P	PUMP
C	COMMINUTOR	S	SAMPLER
CFD	CHEMICAL FEEDER	SC	SCREEN
CP	CONTROL PANEL	SV	SOLENOID VALVE
D	DECANTER	T	TANK
DPC	DEFINITE PURPOSE CONTACTOR	V	VALVE
G	GRINDER	ZS	POSITION SWITCH

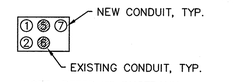
INSTRUMENT & FUNCTION TAGGING



ABBREVIATIONS

A OR AMP	AMPERE	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	NPT	NOMINAL PIPE THREADS
A.C.	ALTERNATING CURRENT	GND. or GRD.	GROUND	OE	OVERHEAD ELECTRIC
AF	FRAME AMPERE	H.I.D.	HIGH INTENSITY DISCHARGE	P	# OF POLES IN CIRCUIT BREAKER
A.F.F.	ABOVE FINISHED FLOOR	HP	HORSEPOWER	PH or ø	PHASE
A.F.G.	ABOVE FINISHED GRADE	H.P.S.	HIGH PRESSURE SODIUM	PM	POWER MONITOR
A.I.C.	AMPERE INTERRUPTING CURRENT	HSPS	HIGH SERVICE PUMP STATION	PMT	PAD MOUNTED TRANSFORMER
AS	AMMETER SELECTOR SWITCH	HVAC	HEAT–VENT–AIR CONDITIONING	PNL	PANEL
AT	TRIP AMPERE	I.G.	ISOLATED GROUND	PSI	POUNDS PER SQUARE INCH
A.T.S.	AUTOMATIC TRANSFER SWITCH	I.D.	INNER DIAMETER	PT	POTENTIAL TRANSFORMER
AUTO	AUTOMATIC	IMC	INTERMEDIATE METAL CONDUIT	PVC	POLYVINYL CHLORIDE
AWG	AMERICAN WIRE GAUGE	IND.	INDUSTRIAL	QTY.	QUANTITY
B.F.G.	BELOW FINISHED GRADE	JB	JUNCTION BOX	RGS	RIGID GALVANIZED STEEL
BLDG.	BUILDING	J.I.C.	JOINT INDUSTRIAL COUNCIL	RVSS	REDUCED VOLTAGE SOLID STATE
C	COUNTERTOP RECEPTACLE	KA	KILOAMPERE	SC	SURGE CAPACITOR
C. or COND.	CONDUIT	KCMIL	1000 CIRCULAR MILS	SCC	SYSTEM CONTROL CENTER
CB	CIRCUIT BREAKER	KV	KILOVOLT	SER	SERVICE ENTRANCE RATED
CKT	CIRCUIT	KVA	KILOVOLT AMPERE	SM	SUB–METER
CP	CONTROL PANEL	KW	KILOWATT	SP	SPARE
CPT	CONTROL PANEL TRANSFORMER	LA	LIGHTNING ARRESTOR	SPD	SURGE–PROTECTIVE DEVICE
CR	CONTROL RELAY	LC	LIGHTING CONTACTOR	S.S.	STAINLESS STEEL
DESIG	DESIGNATION	LTG	LIGHTING	SWBD	SWITCHBOARD
DIA.	DIAMETER	MAX	MAXIMUM	TBA	TO BE ABANDONED
DIV.	DIVISION	MCB	MAIN CIRCUIT BREAKER	TBR	TO BE REMOVED
DPDT	DOUBLE POLE, DOUBLE THROW	mA	MILI–AMP	TCC	TELECOMMUNICATIONS CLOSET
DS	DISCONNECT SWITCH	MC	MANUFACTURER'S CABLE	TDC	TELECOMMUNICATIONS DISTRIBUTION CLOSET
E.C.	ELECTRICAL CONTRACTOR	MCC	MOTOR CONTROL CENTER	TYP.	TYPICAL
EHH	ELECTRIC HANDHOLE	MFR	MANUFACTURER	UE	UNDERGROUND ELECTRIC
EMH	ELECTRIC MANHOLE	MIN.	MINIMUM	UH	UNIT HEATER
EP	EXPLOSION PROOF	M.L.O.	MAIN LUG ONLY	UL	UNDERWRITERS LABORATORY
E.T.R.	EXISTING TO REMAIN	M.O.D.	MOTOR OPERATED DAMPER	U.O.N.	UNLESS OTHERWISE NOTED
EUH	ELECTRIC UNIT HEATER	MS	MOTOR STARTER	UE	UNDERGROUND ELECTRIC
E.W.	EACH WAY	MTD.	MOUNTED	UT	UNDERGROUND TELEPHONE
EX	EXAMPLE	N/A	NOT APPLICABLE	UV	ULTRAVIOLET
EXH	EXHAUST FAN	N.C.	NORMALLY CLOSED	V	VOLT
FU	FUSE	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	VAC	VOLTS ALTERNATING CIRCUIT
FRE	FIBERGLASS REINFORCED EPOXY			VS	VOLTMETER SELECTOR SWITCH
G.C.	GENERAL CONTRACTOR	NID	NETWORK INTERFACE DEVICE (4 POSITION)	W	WIRE
GEN	GENERATOR	N.O.	NORMALLY OPEN	WP	WEATHERPROOF
		No.	NUMBER	XFMR	TRANSFORMER

DUCTBANK SYMBOL KEY



NOTE: REFER TO DUCTBANK SCHEDULE & PLANS FOR EXACT NUMBER & SIZE OF CONDUITS.

GENERAL NOTES:

A. DRAWINGS ARE DIAGRAMMATIC IN NATURE, CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO INSTALLATION CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER DIVISION TRADES TO PROVIDE A COMPLETE AND OPERABLE SYSTEM. LOCATE FIXTURES, DEVICES, ETC. IN ORDER TO AVOID INTERFERENCES.
B. ALL WORK SHALL BE PERFORMED AS REQUIRED BY APPLICABLE SECTION OF THE NATIONAL ELECTRICAL CODE, LATEST EDITION, AND ALL GOVERNING LOCAL CODES, LAWS, AND/OR REGULATIONS.
C. SYSTEM AND EQUIPMENT GROUNDING CONTINUITY SHALL BE ASSURED AS REQUIRED BY APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE.
D. ALL WIRING SHALL BE TYPE "THHN–THWN" U.O.N.; MINIMUM WIRING SHALL BE #12 (POWER WIRE). ALL WIRE SHALL BE COPPER. MINIMUM CONDUIT SIZE FOR METALLIC CONDUIT TO BE 3/4" AND 1" FOR PVC.
E. ALL CIRCUIT PROTECTIVE DEVICES SHALL HAVE THE REQUIRED RATING INTERRUPTING CAPACITY EQUAL TO OR GREATER THAN THE AVAILABLE SHORT–CIRCUIT CURRENT AT ITS SUPPLY TERMINAL; MINIMUM INTERRUPTING CAPACITY. SHALL BE 10,000 AMPS, SYMMETRICAL A.I.C. FOR 120/208V SYSTEMS AND 14,000 AMPS, SYMMETRICAL A.I.C. FOR 277/480V SYSTEMS. REFER TO PANEL SCHEDULES FOR A.I.C. RATINGS.
F. ALL OUTDOOR EXPOSED CONDUIT TO BE PVC COATED RGS. TRANSITION FROM UNDERGROUND TO EXPOSED SHALL BE PVC COATED RGS.
G. ALL UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC UNLESS OTHERWISE INDICATED. ALL CONDUITS SHALL INCLUDE A NYLON PULL CORD.

INSTRUMENT IDENTIFICATION TABLE

ISA–S5.1–1984

LETTER	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (2)		ALARM		
B	BURNER, COMBUSTION			CLOSE, STOP, DECREASE (1)	OFF (1)
C				CONTROL	
D		DIFFERENTIAL		OPEN, START, INCREASE (1)	
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		ENABLED (1)
F	FLOW RATE	RATIO (FRACTION)			FAIL (1)
G			GLASS, VIEWING DEVICE		
H	HAND				HIGH (OPENED)
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW (CLOSED)
M	MOTOR, MOTION (1)	MOMENTARY		MOTOR (1)	MIDDLE OR INTERMEDIATE
N					ON OR OPERATE (1)
O			ORIFICE, RESTRICTION		OVERLOAD (1)
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION	PUMP (1)	
Q	QUANTITY (2)	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD		
S	SPEED, FREQUENCY	SAFETY OR SOLENOID		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (2)		MULTIFUNCTION (2)	MULTIFUNCTION (2)	MULTIFUNCTION (2)
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED, (2)		UNCLASSIFIED (2)	UNCLASSIFIED (2)	UNCLASSIFIED (2)
Y	EVENT, STATE, PRESENCE			RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION			DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

(1) USER'S CHOICE
(2) WHEN USED, SYMBOL OR SIGNAL LINE IS INDICATED.

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By _____ Date 5/7/12

NORTH CAROLINA PROFESSIONAL SEAL 035821 ENGINEER MATTHEW D. MOORE

NO.	DATE	BY	REVISION DESCRIPTION

McGill Associates
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST 2010
DESIGNED BY: DLG
CADD BY: SAR
DESIGN REVIEW: MDM
CONST. REVIEW: KW
FILE NAME: RD-09.00728 E-001.dwg

ELECTRICAL LEGEND, NOTES, SCHEDULES, AND ABBREVIATIONS

SHEET
E-001
SHT. 1 OF 6

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ELECTRICAL OVERALL SITE PLAN

SCALE: 1" = 150'

GRAPHIC SCALE 150 0 75 150 300 450 — 1 INCH = 150 FEET

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By _____ Date 5/7/12

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035821 MATTHEW D. MOORE

NO.	DATE	BY	REVISION DESCRIPTION

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
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DESIGNED BY: DLG
CADD BY: SAR
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FILE NAME: RD-09.00728 E-102.dwg

ELECTRICAL
OVERALL SITE PLAN

SHEET
E-102
SHT. 2 OF 6

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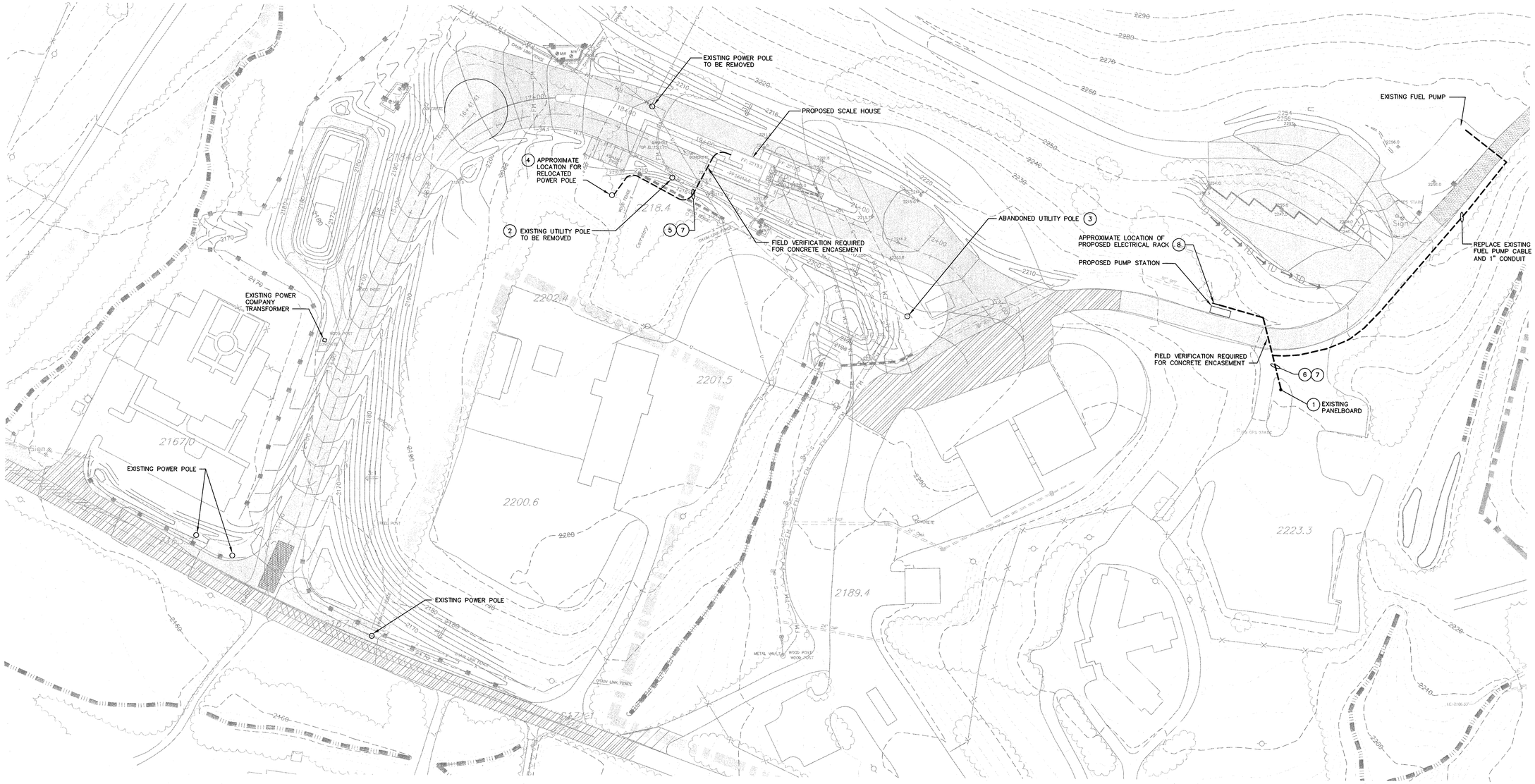
DRAWING NOTES:

1. EXISTING 120/240 VAC, 1ø, 100A PANELBOARD. PROVIDE 20A, 2 POLE, CIRCUIT BREAKER FOR PUMP CONTROL PANEL. PROVIDE CIRCUIT FROM PANELBOARD TO PUMP CONTROL PANEL.
2. COORDINATE WITH TELEPHONE COMPANY TO RELOCATE TELEPHONE CABLE TO NEAREST POLE THAT IS OUT OF THE LIMITS OF CONSTRUCTION.
3. EXISTING UTILITY POLE TO BE REMOVED.
4. COORDINATE WITH THE POWER COMPANY TO RELOCATE EXISTING POWER POLE TO THIS APPROXIMATE LOCATION. ALSO SEE SERVICE POLE DETAIL ON SHEET E-501.
5. PROVIDE 3– 2 1/2" C FOR UTILITY SERVICES TO SCALE HOUSE. CONTRACTOR TO COORDINATE ELECTRICAL, TELEPHONE, AND DATA SERVICES TO SCALE HOUSE.
6. PROVIDE 2–#10 & 1–#10 GND IN 1" C FROM EXISTING PANELBOARD TO PROPOSED PUMP CONTROL PANEL.
7. SEE TYPICAL SITE ELECTRICAL TRENCH DETAIL AND TYPICAL CONCRETE ENCASED DUCTBANK UNDER PAVEMENT DETAIL ON SHEET E-501.
8. SEE ELECTRICAL RACK DETAIL ON SHEET E-501 FOR CONSTRUCTION OF ELECTRICAL RACK FOR PCP. REFER TO SHEET E-601 FOR PUMP CONTROL PANEL ONE-LINE.



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By _____ Date 5/7/12

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035821 MATTHEW D. MOORE

ELECTRICAL SITE PLAN
SCALE: 1" = 60'

60 30 0 30 60 120 180
GRAPHIC SCALE 1 INCH = 60 FEET

NO.	DATE	BY	REVISION DESCRIPTION

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH: (828) 252-0575 FIRM LICENSE # C-0459

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SCALE HOUSE AREA
ELECTRICAL SITE PLAN

SHEET
E-103
SHT. 3 OF 6

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DRAWING NOTES:

1. SEE ELECTRICAL RACK DETAIL ON SHEET E-501.
2. PROVIDE 2-2" C, 1 ACTIVE, 1 SPARE FROM ELECTRICAL RACK TO HOUSEHOLD HAZARDOUS WASTE BUILDING.
3. SEE TYPICAL SITE ELECTRICAL TRENCH DETAIL ON SHEET E-501.
4. PROVIDE 1" C FROM ELECTRICAL RACK TO ATTENDANT BUILDING FOR POWER TO THE ATTENDANT BUILDING. SEE TYPICAL SITE ELECTRICAL TRENCH DETAIL ON SHEET E-501.

RECORD DRAWING

This Drawing has been modified to reflect changes made during construction based upon information provided by the Contractor and construction observations made by the Owner's Authorized Representative.

By _____ Date 5/7/12

NORTH CAROLINA PROFESSIONAL SEAL 035821 ENGINEER MATTHEW D. MOORE

ELECTRICAL SITE PLAN
SCALE: 1" = 30'

GRAPHIC SCALE 30 15 0 15 30 60 90 — 1 INCH = 30 FEET

NO.	DATE	BY	REVISION DESCRIPTION
1	8/29/11	MDM	ELECTRICAL SERVICE MODIFICATIONS

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST 2010
DESIGNED BY: DLG
CADD BY: SAR
DESIGN REVIEW: MDM
CONST. REVIEW: KW
FILE NAME: RD-09.00728 E-104.dwg

CONVENIENCE CENTER
ELECTRICAL SITE PLAN

SHEET
E-104
SHT. 4 OF 6

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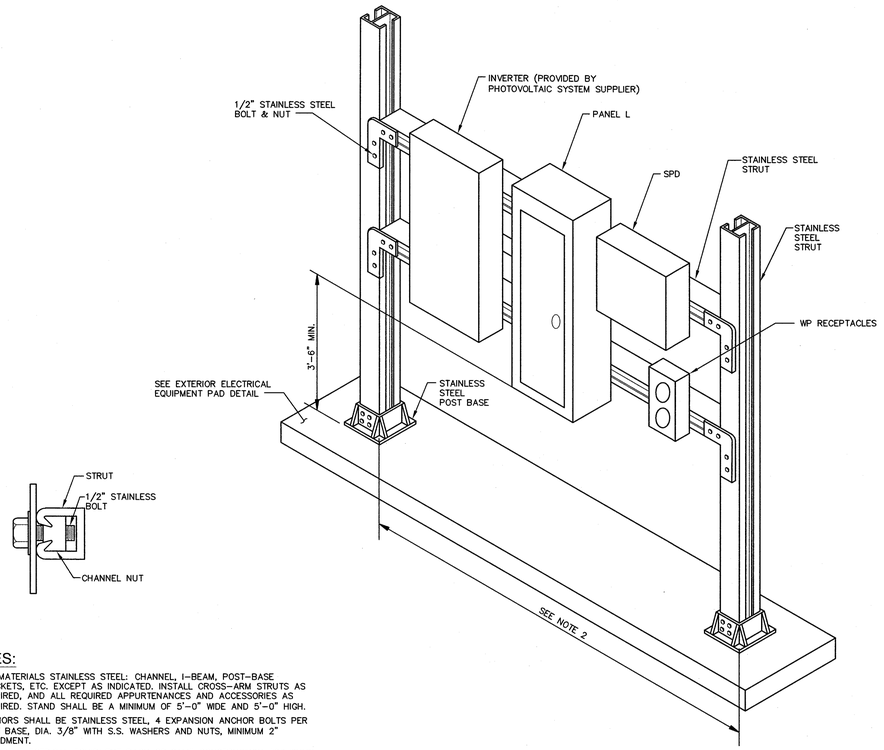
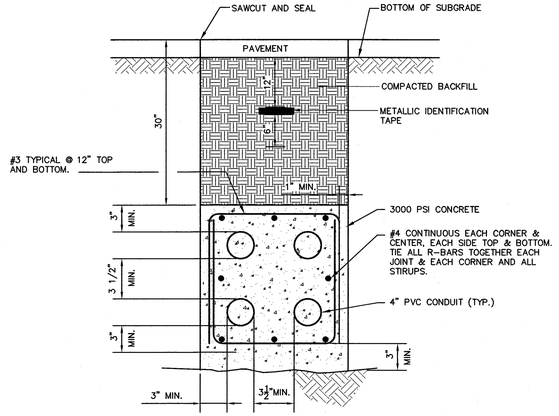


NOTES:

1. ALL MATERIALS STAINLESS STEEL: CHANNEL, I-BEAM, POST-BASE BRACKETS, ETC. EXCEPT AS INDICATED. INSTALL CROSS-ARM STRUTS AS REQUIRED, AND ALL REQUIRED APPURTENANCES AND ACCESSORIES AS REQUIRED. STAND SHALL BE A MINIMUM OF 5'-0" WIDE AND 5'-0" HIGH.
2. ANCHORS SHALL BE STAINLESS STEEL, 4 EXPANSION ANCHOR BOLTS PER POST BASE, DIA. 3/8" WITH S.S. WASHERS AND NUTS, MINIMUM 2" EMBEDMENT.
3. PROVIDE ELECTRICAL EQUIPMENT RACK OF SAME CONSTRUCTION FOR PUMP STATION AREA. PROVIDE WITH ADEQUATE MOUNTING SPACE FOR ALL EQUIPMENT REQUIRED AT PUMP STATION.

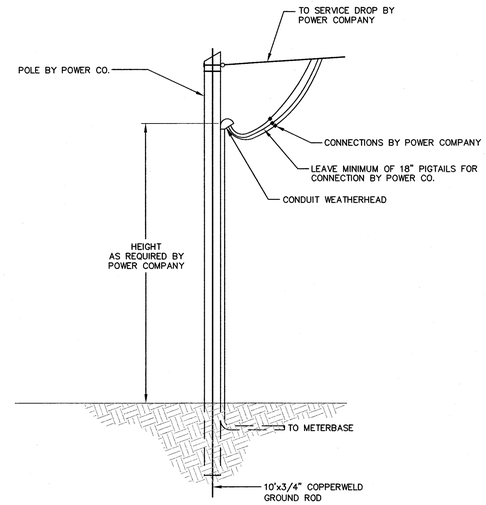
ELECTRICAL RACK DETAIL
NOT TO SCALE



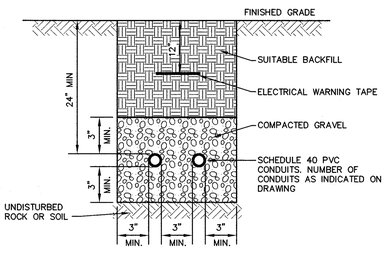
NOTE:

1. ALL DUCTBANKS UNDER DRIVING AREAS SHALL BE CONCRETE ENCASED TO A MINIMUM OF 5 FEET AWAY FROM DRIVING AREA.

TYPICAL CONCRETE ENCASED DUCTBANK UNDER PAVEMENT DETAIL
NOT TO SCALE



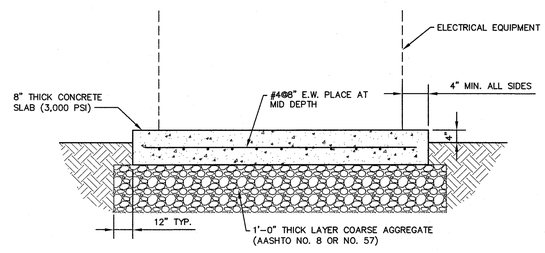
SERVICE POLE DETAIL
NOT TO SCALE



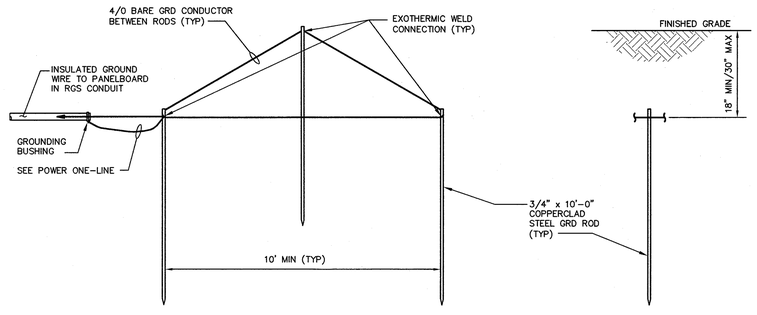
NOTES:

1. ALL TRENCHING, BEDDING, AND BACKFILLING BY THE SITE CONTRACTOR.

TYPICAL SITE ELECTRICAL TRENCH DETAIL
NOT TO SCALE



EXTERIOR ELECTRICAL EQUIPMENT PAD
NOT TO SCALE



GROUNDING COUNTERPOISE DETAIL
NOT TO SCALE

RECORD DRAWING

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By _____ Date 5/7/12

NORTH CAROLINA PROFESSIONAL SEAL 035821 ENGINEER MATTHEW D. MOORE

NO.	DATE	BY	REVISION DESCRIPTION

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST 2010
DESIGNED BY: DLG
CADD BY: SAR
DESIGN REVIEW: MDM
CONST. REVIEW: KW
FILE NAME: RD-09.00728 E-501.dwg

ELECTRICAL DETAILS

SHEET
E-501
SHT. 5 OF 6

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PANEL L
MOUNTING SURFACE
LOCATION ELECTRICAL RACK

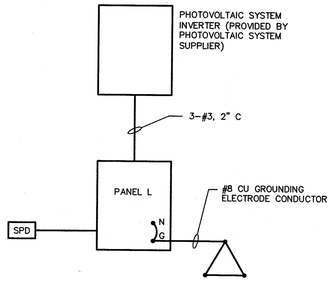
BUS AMP 100A
PHASE 1
NEMA TYPE 4X STAINLESS STEEL

MIN. A.I.C. 10,000
WIRE 3

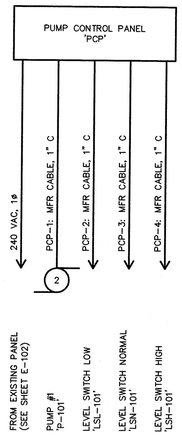
MAIN BREAKER 100A
VOLTAGE 120/240

CKT	DESCRIPTION	BREAKER AMP	BREAKER POLES	LOAD (KW) A	LOAD (KW) B	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE
1	ATTENDANT BUILDING	60	2	3		3	6	10	1
3					3				
5	SPARE	20	1	-					
7	SPARE	20	1		-				
9	SPARE	20	1	-					
11	SPACE								
13	SPACE								
15	SPD	60	2		-	3	6	10	1
17				-					
	SUB-TOTAL LOAD KW			3	3				

COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	LOAD (KW) B	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT
2	12	12	3	0.6		2	20	HOUSEHOLD HAZARDOUS WASTE BUILDING	2
					0.6				4
3/4	12	12	2	0.12		1	20	RACK RECEPTACLES	6
					-	1	20	SPARE	8
				-		1	20	SPARE	10
								SPACE	12
								SPACE	14
								SPACE	16
								SPACE	18
	SUB-TOTAL LOAD KW			0.72	0.6				
	TOTAL LOAD KW			3.72	3.6				



CONVENIENCE CENTER
POWER ONE-LINE
NOT TO SCALE



PUMP CONTROL PANEL ONE-LINE
NOT TO SCALE

RECORD DRAWING

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By _____ Date 5/7/12

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035821 MATTHEW D. MOORE

NO.	DATE	BY	REVISION DESCRIPTION

McGill ASSOCIATES
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55 BROAD STREET ASHEVILLE, NC 28801 PH: (828) 252-0575 FIRM LICENSE # C-0459

STONEY MOUNTAIN ROAD LANDFILL
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HENDERSON COUNTY

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JOB NO.: 09.00728
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FILE NAME: RD-09.00728 E-601.dwg

SCHEDULES AND DIAGRAMS

SHEET
E-601
SHT. 6 OF 6

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GENERAL NOTES

STRUCTURAL DESIGN CRITERIA (APPENDIX B):

BUILDING CODE: NORTH CAROLINA BUILDING CODE, 2009 EDITION

DESIGN LOADS:

	LIVE LOADS (PSF)	REDUCED	SUPERIMPOSED DEAD LOAD (PSF)
SLOPED ROOF	20	NO	15
FLAT ROOF	25	NO	15

SNOW LOAD:

GROUND SNOW LOAD (Pg):	15 PSF
FLAT ROOF SNOW LOAD (Pf):	15 PSF
SNOW EXPOSURE FACTOR (Ce):	1.0
SNOW INPORTANCE FACTOR (I_s):	1.0
THERMAL FACTOR (Ct):	1.0

WIND LOAD CRITERIA (ASCE 7-05):

WIND VELOCITY:	90 MPH
EXPOSURE FACTOR:	C
IMPORTANCE FACTOR (I_w):	1.0
WIND BASE SHEARS:	Vx = 6.7k Vy = 4.6k

SEISMIC LOAD CRITERIA (NEHRP):

BUILDING OCCUPANCY CATEGORY	II
IMPORTANCE FACTOR (I_E):	1.0
MAPPED SPECTRAL RESPONSE ACCELERATIONS:	S_S = 39.3% g S_1= 10.6% g
SITE CLASS:	D
ADJUSTED SPECTRAL RESPONSE ACCELERATIONS:	S_{MS} = 58.4% g S_{M1}= 25.3% g
DESIGN SPECTRAL RESPONSE ACCELERATIONS:	S_{DS} = 38.9% g S_{D1}= 16.8% g
SEISMIC DESIGN CATEGORY:	C
BASIC SEISMIC-FORCE-RESISTING SYSTEM:	BEARING WALLS
LATERAL SYSTEM:	INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
SYSTEM OVER-STRENGTH FACTOR:	2.50
REDUNDANCY FACTOR:	1.00
RESPONSE MODIFICATION FACTOR (R):	3.50
DEFLECTION AMPLIFICATION FACTOR (Cd):	2.25
SEISMIC RESPONSE COEFFICIENT (Cs):	0.111
SEISMIC BASE SHEAR:	Vx = 7.6k Vy = 7.6k
ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE
ARCHITECTURAL/MECHANICAL COMPONENTS ANCHORED:	YES
LATERAL DESIGN CONTROL:	SEISMIC

FOUNDATIONS:

DESIGN SOIL BEARING PRESSURE: 2000 PSF
FROST DEPTH: 24"; BOTTOM OF ALL EXTERIOR FOOTINGS AND TURNED-DOWN SLABS SHALL BEAR AT OR BELOW SPECIFIED FROST DEPTH.

LATERAL EARTH PRESSURES

1. ACTIVE PRESSURE: 50 PCF
2. AT-REST PRESSURE: 75 PCF
3. PASSIVE PRESSURE: 300 PCF

FRICTION COEFFICIENT: 0.4

CONCRETE:

DESIGN STANDARD: ACI 318-08, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"

DESIGN COMPRESSIVE STRENGTH AT 28 DAYS (f'c): 3000 PSI

DENSITY: 145 PCF (NORMAL WEIGHT)

MIX DESIGNS:

1. CEMENT SHALL CONFORM TO ASTM C 150, TYPE 1 PORTLAND CEMENT.
2. FLY ASH SHALL BE ASTM C 618, TYPE C OR F, BUT NOT EXCEEDING 4% LOSS ON IGNITION. FLY ASH SHALL NOT EXCEED 20% OF CEMENT CONTENT BY WEIGHT.
3. NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C 33. AGGREGATE SIZE SHALL BE #57 OR #67 FOR ALL CONCRETE EXCEPT 3/8" MAXIMUM FOR MASONRY GROUT.
4. AIR ENTRAINING ADMIXTURE SHALL BE USED IN ACCORDANCE WITH ACI 301 IN ALL CONCRETE EXPOSED TO FREEZING AND THAWING.
5. ALL CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" EXCEPT CONCRETE UTILIZING HIGH OR MID-RANGE WATER REDUCERS SHALL HAVE A MAXIMUM SLUMP OF 6".

REINFORCING STEEL: ASTM A615, GRADE 60

WELDED WIRE MAT: ASTM A184 AND A185

REINFORCEMENT LAP SPLICES:

1. ALL BARS MARKED CONTINUOUS ("CONT.") SHALL BE LAPPED A MINIMUM OF 40 BAR DIAMETERS.
2. ALL WALL AND FOOTING DOWELS SHALL EXTEND 30 BAR DIAMETERS OR 24" INTO WALL, WHICHEVER IS GREATEST. (U.N.O. IN DETAILS).
3. WELDED WIRE MAT AND FABRIC SHALL BE LAPPED 1'-0" AT ALL SPLICES.

CONCRETE COVER FOR REINFORCEMENT:

UNFORMED SURFACE CAST AGAINST EARTH:	3"
FORMED SURFACE EXPOSED TO EARTH OR WEATHER:	2"
FORMED SURFACE NOT EXPOSED TO EARTH OR WEATHER: SLABS:	3/4"

PLACEMENT:

1. WHEN HOT WEATHER CONDITIONS EXIST, PLACE AND CURE CONCRETE IN CONFORMANCE WITH ACI 305.
2. WHEN COLD WEATHER CONDITIONS EXIST, PLACE AND CURE CONCRETE IN CONFORMANCE WITH ACI 306.
3. PLACE AND FINISH CONCRETE TO TOLERANCES CONFORMING WITH ACI 117; WITH FLATNESS WITHIN 1/4" IN 10 FT., AS DETERMINED BY A 10 FOOT STRAIGHTEDGE
4. PLACE AND CONSOLIDATE CONCRETE IN CONFORMANCE WITH ACI 309. PLACED ANYWHERE ON THE SLAB IN ANY DIRECTION.

CURING:

1. CURE CONCRETE SLABS WITH MINIMUM 30% SOLIDS, LIQUID MEMBRANE CURING COMPOUND APPLIED WITHIN TWO HOURS AFTER COMPLETION OF FINISHING. ALTERNATIVELY, APPLY CONTINUOUS MOIST CURING FOR A MINIMUM OF SEVEN DAYS.

REINFORCING STEEL SHOP DRAWINGS:

1. SUBMIT DRAWINGS FOR FABRICATION, BENDING AND PLACEMENT OF CONCRETE REINFORCEMENT IN COMPLIANCE WITH ACI SP-66. SUBMIT THREE PRINTS OF EACH SHOP DRAWING. CONTRACTOR SHALL REVIEW AND APPLY APPROVAL STAMP TO SHOP DRAWINGS PRIOR TO SUBMITTING FOR ENGINEER'S REVIEW.

STRUCTURAL MASONRY:

DESIGN STANDARDS:

ACI 530-02/ASCE 5-08, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES"

ACI 530.1-02/ASCE 6-08, "SPECIFICATIONS FOR MASONRY STRUCTURES"

CONCRETE MASONRY UNITS (CMU):

DENSITY: 100% LIGHTWEIGHT (MAX. 95 PCF), ASTM C90
NET AREA UNIT STRENGTH (ASTM C 140): 1900 PSI
DESIGN COMPRESSIVE STRENGTH (f'm): 1500 PSI

MORTAR:

ASTM C270, TYPE "M" OR "S", PORTLAND CEMENT-LIME MIX, WITH 28-DAY COMPRESSIVE STRENGTH OF 1800 PSI.

CONCRETE GROUT FOR BOND BEAMS AND REINFORCED CELLS:

AGGREGATE: ASTM C476, EITHER FINE (SAND) OR COARSE (SAND + NCDOT #78M STONE) AGGREGATE

28-DAY COMPRESSIVE STRENGTH (f'c): 2500 PSI.

GROUTING:

1. ALL BOND BEAMS AND REINFORCED VERTICAL CELLS SHALL BE FILLED WITH CONCRETE GROUT, NOT MORTAR.
3. VERTICAL REINFORCING BARS SHALL BE HELD IN POSITION TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 4 FEET. WIRE BAR POSITIONER ACCESSORIES FOR SUCH SUPPORT SHALL BE USED.

STEEL REINFORCING:

1. SPLICED REINFORCING SHALL BE LAPPED 48 BAR DIAMETERS, U.N.O., BUT NOT LESS THAN 24".
2. PROVIDE HORIZONTAL JOINT REINFORCING AT 16" OC UNO. LAP ALL SPLICES A MINIMUM OF 6" INCLUDING CORNERS AND TEES. DISCONTINUE JOINT REINFORCING AT CONTROL JOINTS.

STRUCTURAL STEEL:

DESIGN STANDARDS:

AISC, STEEL CONSTRUCTION MANUAL, THIRTEENTH EDITION

AMERICAN WELDING SOCIETY, "STRUCTURAL WELDING CODE - STEEL", AWS D1.1.

GRADE OF STEEL:

WIDE FLANGE ROLLED SHAPES:	ASTM A572, GRADE 50, OR ASTM A992
PLATES, CHANNELS, ANGLES AND BARS:	ASTM A36 OR A572, GRADE 50
ROUND HOLLOW STRUCTURAL SECTION:	ASTM A53, GRADE B

CONNECTIONS:

1. BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH A325N BOLTS, 3/4" DIA. MINIMUM, UNLESS NOTED OTHERWISE.
2. MINIMUM PLATE THICKNESS SHALL BE 3/8" (U.N.O.), MINIMUM WELD SIZE SHALL BE 3/16" (U.N.O.).
3. EXPANSION BOLTS SHALL PROVIDE A MINIMUM SAFETY FACTOR OF FOUR (4) TIMES THE FOLLOWING MINIMUM SERVICE LOAD CAPACITIES:

SLEEVE ANCHORS IN 2000 PSI MASONRY:			WEDGE ANCHORS IN 3000 PSI MASONRY:		
DIA.	SHEAR	TENSION	DIA.	SHEAR	TENSION
1/4"	270 LBS.	300 LBS.	1/2"	1950 LBS.	1250 LBS.
1/2"	930 LBS.	600 LBS.	3/4"	3750 LBS.	2250 LBS.

WEDGE TYPE EXPANSION ANCHORS ARE PERMITTED FOR EMBEDMENT IN CONCRETE CONSTRUCTION OR SOLID GROUTED MASONRY ONLY. EMBEDMENT OF WEDGE ANCHORS INTO BRICK, UNGROUTED HOLLOW CONCRETE MASONRY OR SOLID CONCRETE MASONRY IS NOT PERMITTED. SLEEVE TYPE EXPANSION ANCHORS MAY BE USED AS SHOWN IN CONCRETE OR MASONRY CONSTRUCTION.

SHOP DRAWINGS:

1. SUBMIT SHOP DRAWINGS FOR DETAILS, FABRICATION, AND ERECTION OF STRUCTURAL STEEL. SUBMIT TWO PRINTS OF EACH SHOP DRAWING. CONTRACTOR SHALL REVIEW AND APPLY APPROVAL STAMP TO SHOP DRAWINGS PRIOR TO SUBMITTING FOR ENGINEER'S REVIEW.

PAINTING & GALVANIZING:

1. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED.

PREFABRICATED WOOD TRUSSES:

DESIGN STANDARDS:

TRUSS PLATE INSTITUTE, "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION" (ANSI/TPI 1-2002)

MINIMUM DESIGN LOADS:

TOP CHORD	LIVE LOAD:	20 PSF
	DEAD LOAD:	10 PSF
BOTTOM CHORD	LIVE LOAD:	10 PSF
	DEAD LOAD:	5 PSF
DEFLECTION:	LIVE LOAD:	L/360 MAX.
	TOTAL LOAD:	L/240 MAX.

WOOD TRUSSES SHALL BE DESIGNED TO RESIST A NET UPLIFT PRESSURE NORMAL TO THE TOP CHORD OF 15 PSF.

FABRICATION AND PLACEMENT REQUIREMENTS:

1. ALL CONNECTIONS BETWEEN TRUSSES SHALL BE DESIGNED AND DETAILED BY THE TRUSS FABRICATOR.
2. PERMANENT BRIDGING SHALL BE DESIGNED BY THE TRUSS FABRICATOR.
3. TRUSSES SHALL BE ASSEMBLED, HANDLED, STORED AND ERECTED IN ACCORDANCE WITH STANDARDS OF THE TRUSS PLATE INSTITUTE.

SHOP DRAWINGS:

1. SHOP DRAWINGS SEALED BY AN ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA SHALL BE SUBMITTED FOR REVIEW, DESCRIBING ALL DIMENSIONS, SIZES AND GRADE OF LUMBER, DESIGN LOADS, FORCES AND REACTIONS FOR ALL MEMBERS OF EACH TRUSS.

ROUGH CARPENTRY:

DESIGN STANDARDS:

AMERICAN FOREST AND PAPER ASSOCIATION, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" (ANSI/AF&PA NDS-2001) WITH "NDS SUPPLEMENT", 2001 EDITION.

APA - THE ENGINEERED WOOD ASSOCIATION, "ENGINEERED WOOD CONSTRUCTION GUIDE", 2005 EDITION, AND "PANEL DESIGN SPECIFICATION", 2004 EDITION.

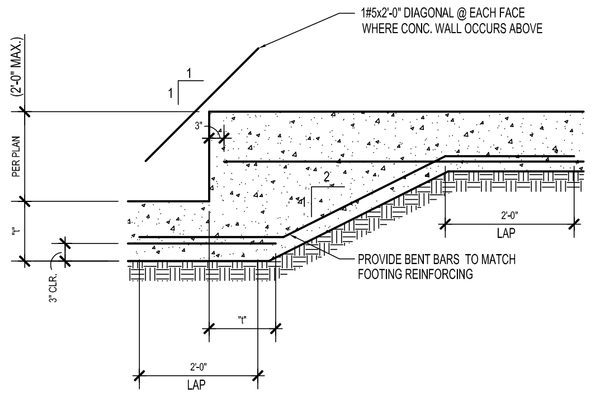
SHEATHING STRESS RATINGS:

WALL SHEATHING:	32/16
ROOF SHEATHING:	40/20

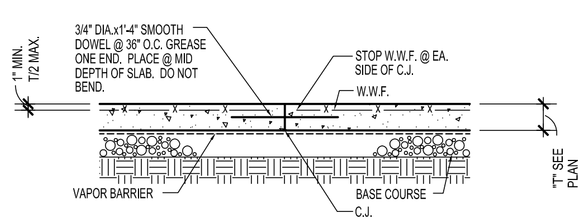
ALL ATTACHMENTS OF WOOD FRAMING SHALL NOT BE LESS THAN THAT DESCRIBED IN "TABLE 2304.9.1-FASTENING SCHEDULE" WITHIN THE NORTH CAROLINA BUILDING CODE.

FRAMING REQUIREMENTS:

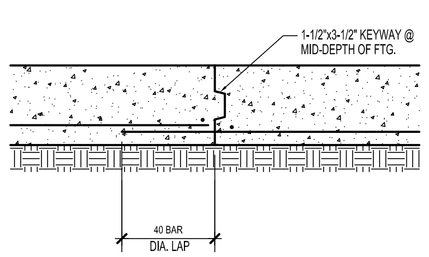
1. ALL WOOD SHEATHING SHALL BE IDENTIFIED WITH THE APPROPRIATE GRADE TRADEMARK OF THE ENGINEERED WOOD ASSOCIATION (APA) AND SHALL MEET THE REQUIREMENTS OF U.S. PRODUCT STANDARD PS-1.
2. SHEATHING PANELS SHALL BE PLACED WITH LONG DIMENSION (GRAIN) PERPENDICULAR TO SUPPORTS. PANELS SHALL BE CONTINUOUS OVER THREE OR MORE SUPPORTS. END JOINTS SHALL BE STAGGERED.
3. SHEATHING PANELS SHALL BE NAILED TO ALL WOOD SUPPORTS AND BLOCKING WITH 10d NAILS AT 6" O.C. ALONG ALL PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS.



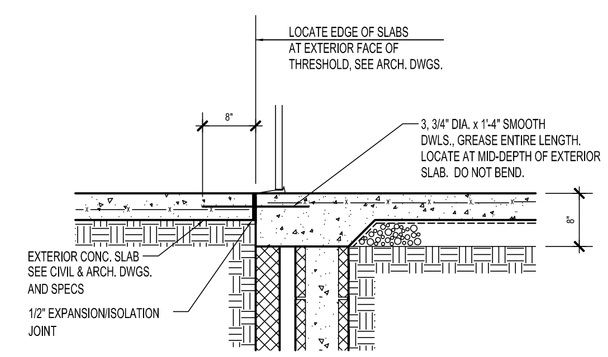
A TYPICAL STEPPED FOOTING



B TYPICAL SLAB ON GRADE CONST. JOINT

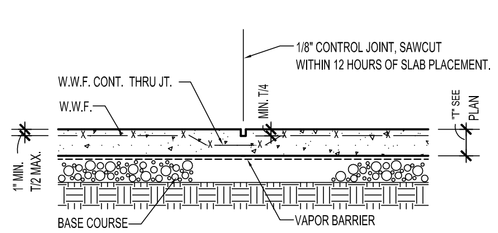


C TYPICAL WALL FOOTING CONST. JOINT DETAIL



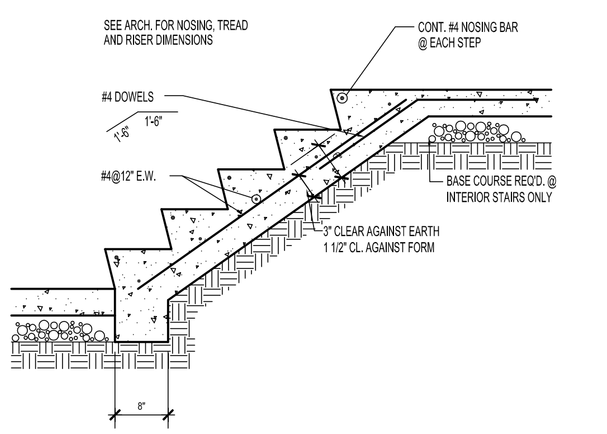
D TYP. SLAB EDGE @ THRESHOLD

3/4"=1'-0"



E TYPICAL SLAB ON GRADE CONTROL JOINT

@ INTERIOR SLABS



F TYP. STAIR ON GRADE

NO.	DATE	BY	REVISION DESCRIPTION

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16576 PATRICK THOMAS DUNN
06/31/10

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST 31, 2010
DESIGNED BY: PTD
CADD BY: PTD
DESIGN REVIEW: ____
CONST. REVIEW: ____
FILE NAME: ____

GENERAL NOTES AND TYPICAL DETAILS

Dunn Structural Engineering, P.L.L.C.
P.O. Box 1560
Arden, NC 28704
Phone: 828-687-9008
Fax: 828-687-9010

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S1.0

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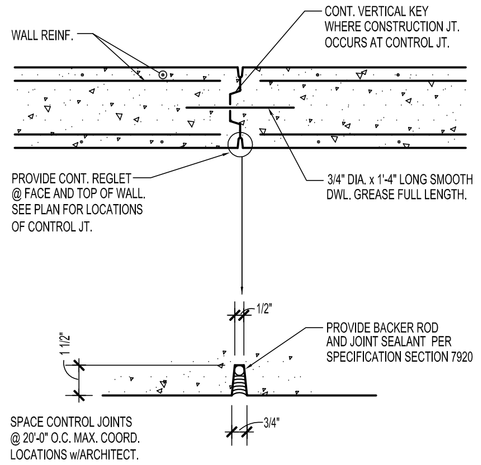
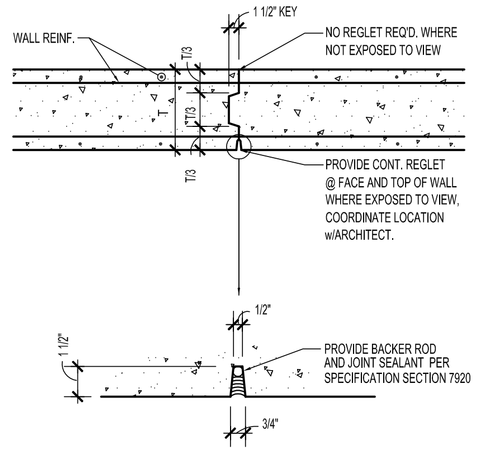


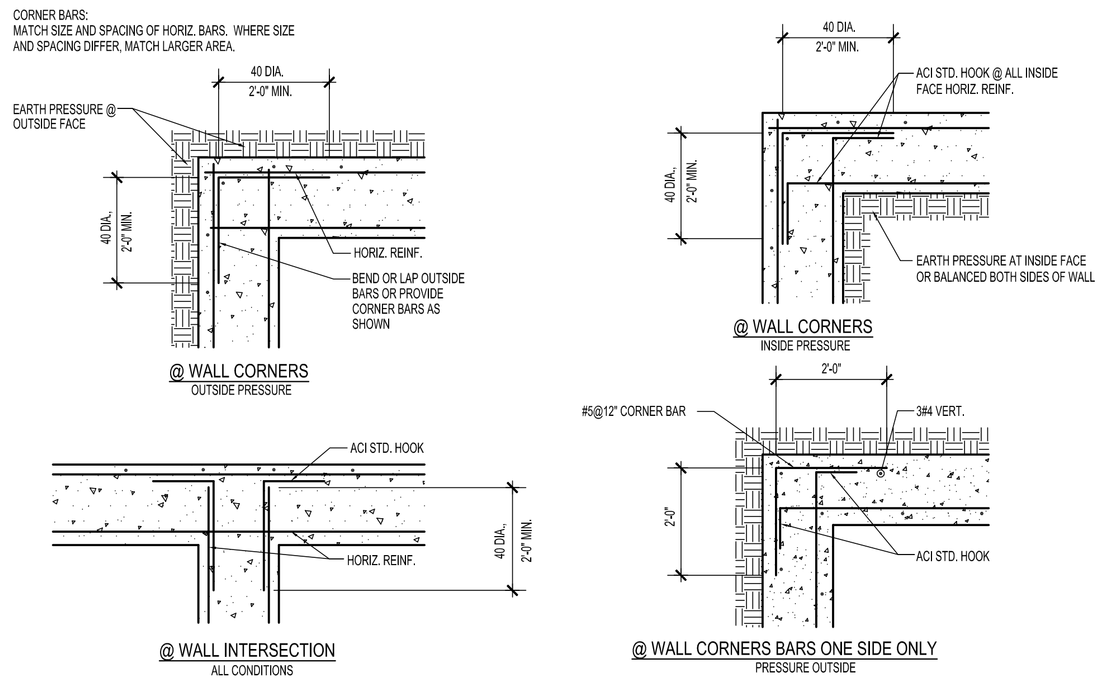
A TYP. WALL CONTROL JOINT

@ CONCRETE WALLS EXPOSED TO VIEW



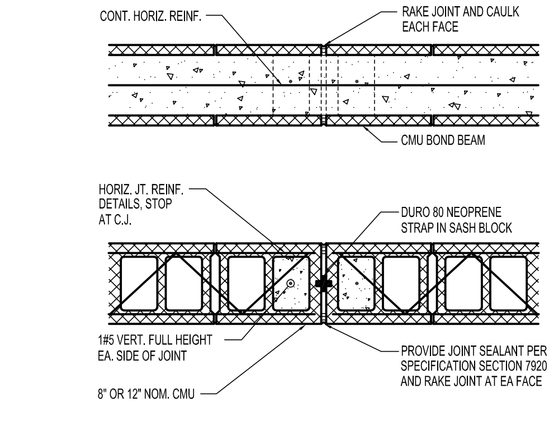
B TYP. CONSTRUCTION JOINT

@ CONCRETE WALL



C TYPICAL CORNER REINFORCING

@ CONCRETE WALL



D TYP. CONTROL JOINT

@ CMU WALLS

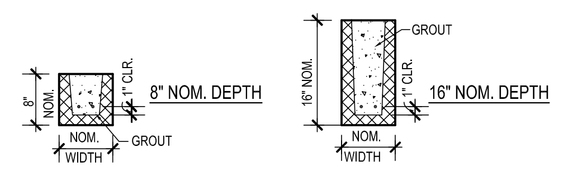
E TYP. CORNER REINF.

AT MASONRY BOND BEAMS

F JT. REINFORCEMENT LAP SPLICE

G TYP. REINFORCEMENT @ MASONRY WALL OPENING

CMU MASONRY LINTELS (INTERIOR & EXTERIOR WALLS)						
CLEAR OPENING	DEPTH	REINFORCING				MIN. BRG.
		6" CMU	8" CMU	10" CMU	12" CMU	
LESS THAN 6'-1"	8"	1-#4	1-#5	2-#5	2-#5	8"
LESS THAN 8'-1"	16"	1-#4	1-#5	2-#5	2-#5	8"
LESS THAN 10'-1"	16"	1-#4	1-#5	2-#5	2-#5	12"
LESS THAN 12'-1"	16"	-	-	-	2-#5	12"



NOTE:
1. EXTEND REINFORCING A MINIMUM OF 24" OR 40 BAR DIAMETERS EACH SIDE OF OPENING.
2. FILL WITH GROUT ALL CORES UNDER BEARING FROM BOTTOM OF LINTEL TO 48" MINIMUM BELOW LINTEL.
3. LINTELS OVER 12'-0" CLEAR SPAN OR SUPPORTING FLOOR OR ROOF REQUIRE SPECIAL DESIGN. SEE PLANS FOR LOCATIONS.
4. THIS SCHEDULE IS FOR LIGHTWEIGHT BLOCK ONLY (105PCF MAX.).

H MASONRY LINTEL SCHEDULE

J TYP. ARMORED CORNER

@ CONC WALLS

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16576 PATRICK THOMAS DUNN 10/15/10

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00726
DATE: AUGUST 31, 2010
DESIGNED BY: PTD
CADD BY: PTD
DESIGN REVIEW: _____
CONST. REVIEW: _____
FILE NAME:

TYPICAL DETAILS

SHEET

S1.1

Dunn Structural Engineering, P.L.L.C.
P.O. Box 1560 Phone: 828-687-9008
Arden, NC 28704 Fax: 828-687-9010

NO.	DATE	BY	REVISION DESCRIPTION
1	10-15-10		REVISED FOR REBID

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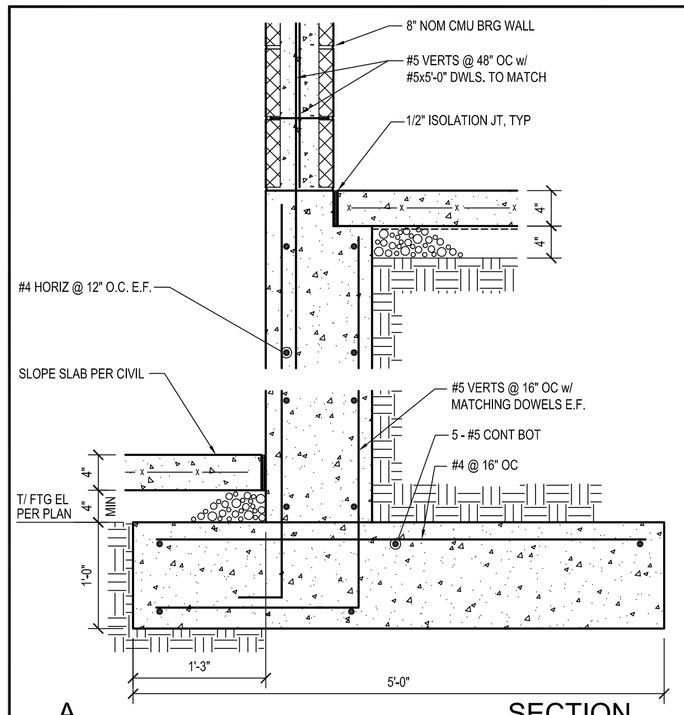
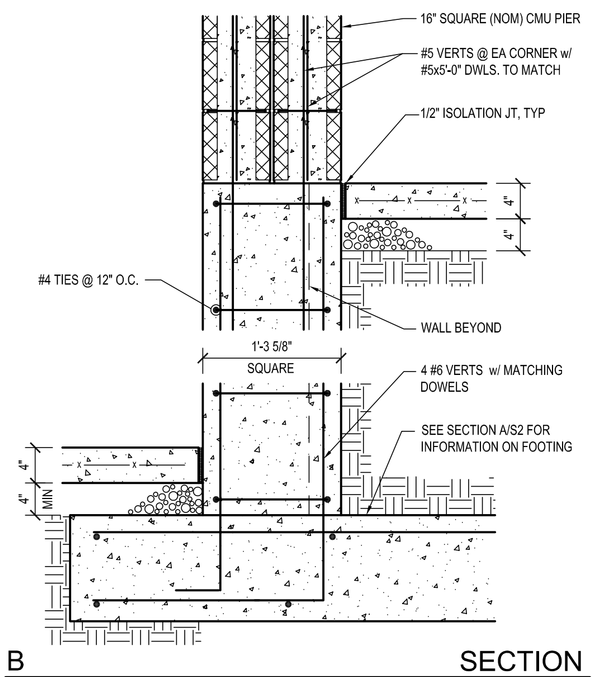


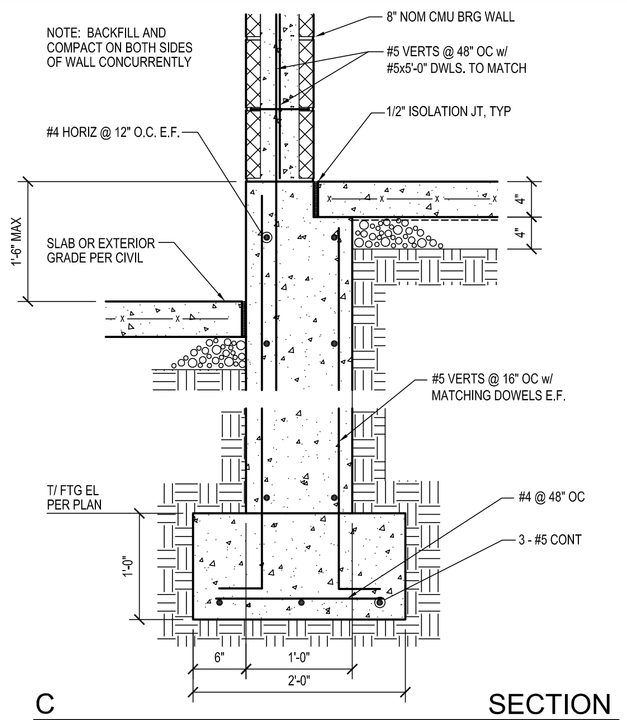
A SECTION

S401|1 1"=1'-0"



B SECTION

S401|2 1"=1'-0"



C SECTION

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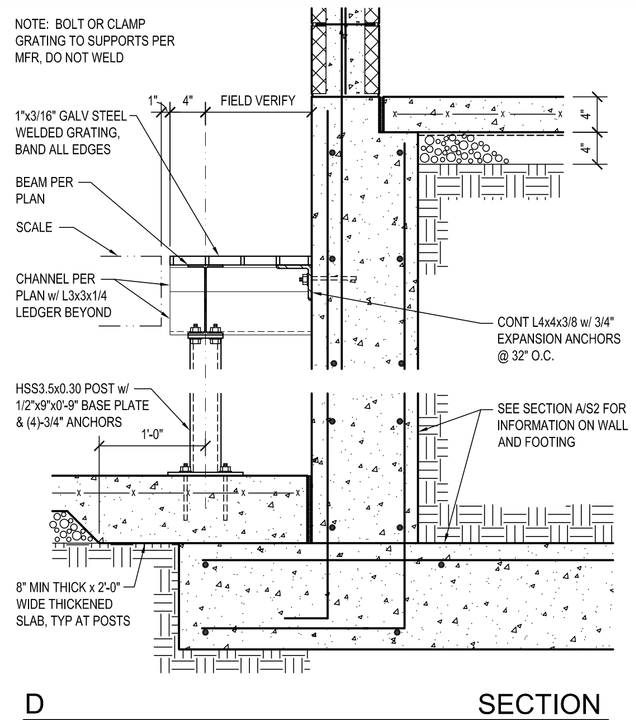

D SECTION

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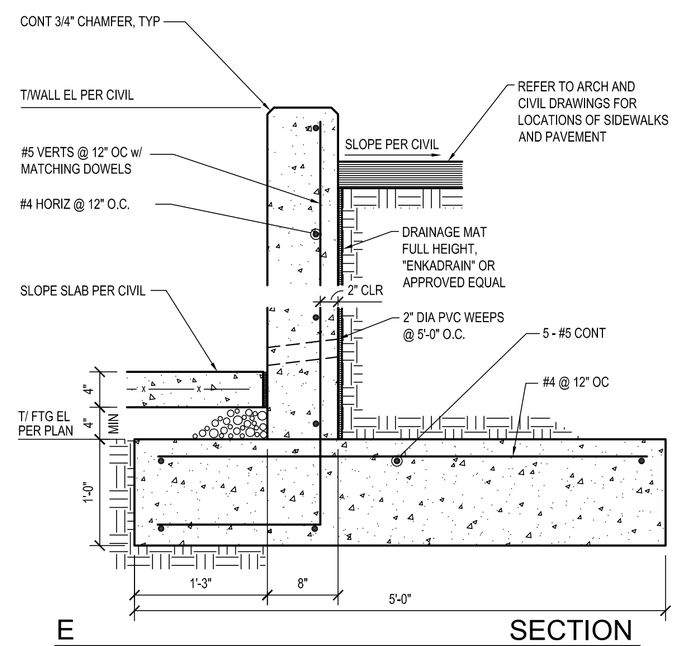
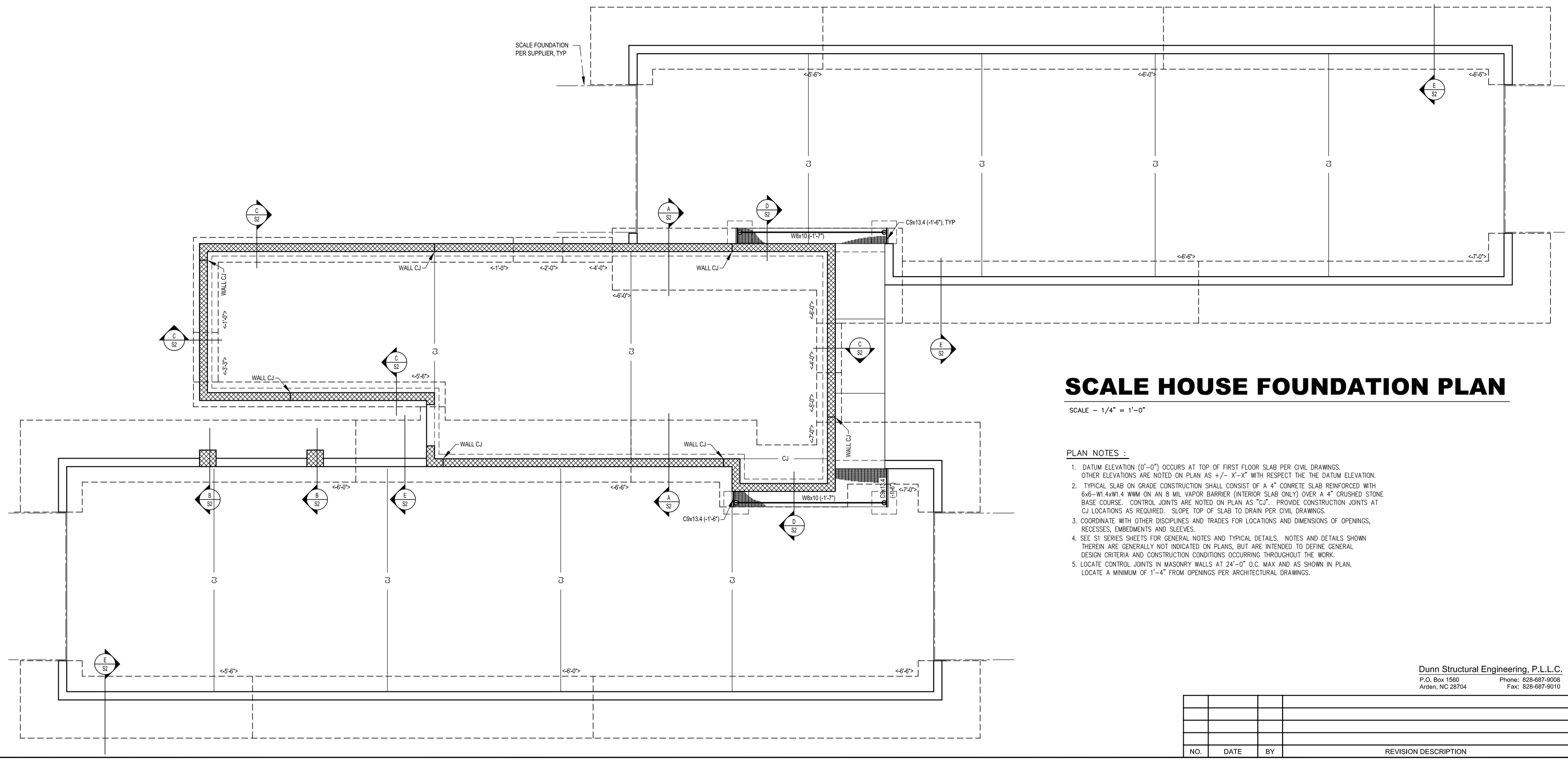


E SECTION

S401|2 1"=1'-0"



SCALE HOUSE FOUNDATION PLAN

SCALE – 1/4" = 1'–0"

PLAN NOTES :

1. DATUM ELEVATION (0'–0") OCCURS AT TOP OF FIRST FLOOR SLAB PER CIVIL DRAWINGS. OTHER ELEVATIONS ARE NOTED ON PLAN AS +/– X'–X" WITH RESPECT THE THE DATUM ELEVATION.
2. TYPICAL SLAB ON GRADE CONSTRUCTION SHALL CONSIST OF A 4" CONRETE SLAB REINFORCED WITH 6x6–W1.4xW1.4 WWM ON AN 8 MIL VAPOR BARRIER (INTERIOR SLAB ONLY) OVER A 4" CRUSHED STONE BASE COURSE. CONTROL JOINTS ARE NOTED ON PLAN AS "CJ". PROVIDE CONSTRUCTION JOINTS AT CJ LOCATIONS AS REQUIRED. SLOPE TOP OF SLAB TO DRAIN PER CIVIL DRAWINGS.
3. COORDINATE WITH OTHER DISCIPLINES AND TRADES FOR LOCATIONS AND DIMENSIONS OF OPENINGS, RECESSES, EMBEDMENTS AND SLEEVES.
4. SEE S1 SERIES SHEETS FOR GENERAL NOTES AND TYPICAL DETAILS. NOTES AND DETAILS SHOWN THEREIN ARE GENERALLY NOT INDICATED ON PLANS, BUT ARE INTENDED TO DEFINE GENERAL DESIGN CRITERIA AND CONSTRUCTION CONDITIONS OCCURRING THROUGHOUT THE WORK.
5. LOCATE CONTROL JOINTS IN MASONRY WALLS AT 24'–0" O.C. MAX AND AS SHOWN IN PLAN. LOCATE A MINIMUM OF 1'–4" FROM OPENINGS PER ARCHITECTURAL DRAWINGS.

Dunn Structural Engineering, P.L.L.C.
P.O. Box 1560
Arden, NC 28704
Phone: 828-687-9008
Fax: 828-687-9010

NO.	DATE	BY	REVISION DESCRIPTION

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16576 PATRICK THOMAS DUNN
06/31/10

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST 31, 2010
DESIGNED BY: PTD
CADD BY: PTD
DESIGN REVIEW: ____
CONST. REVIEW: ____
FILE NAME:

SCALE HOUSE FOUNDATION PLAN AND DETAILS

SHEET

S2

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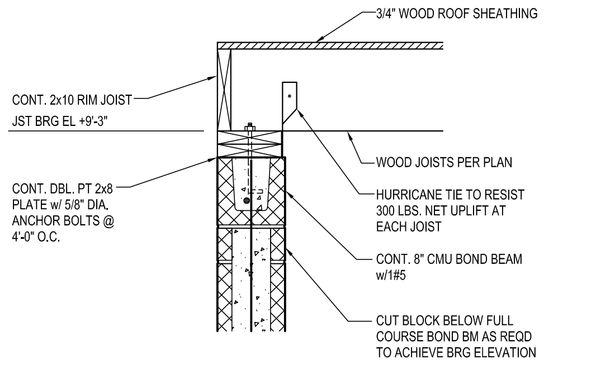
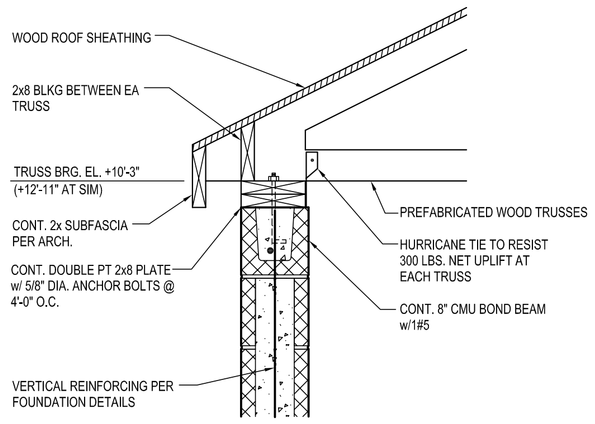


A SECTION

S401|1 1"=1'-0"



B SECTION

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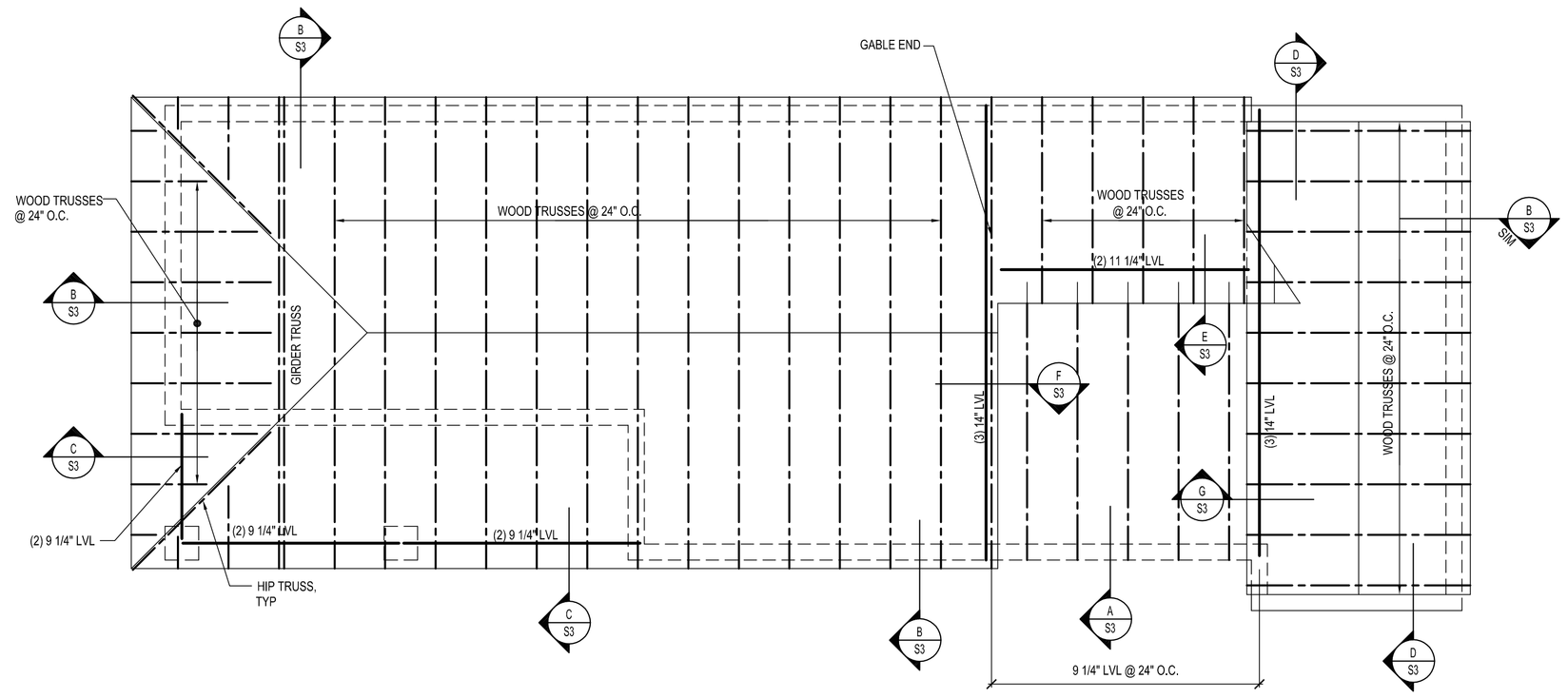

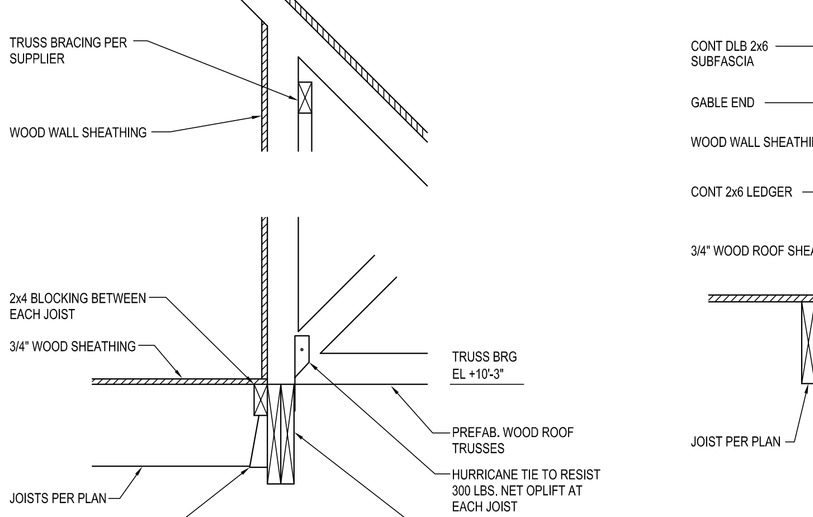

C SECTION

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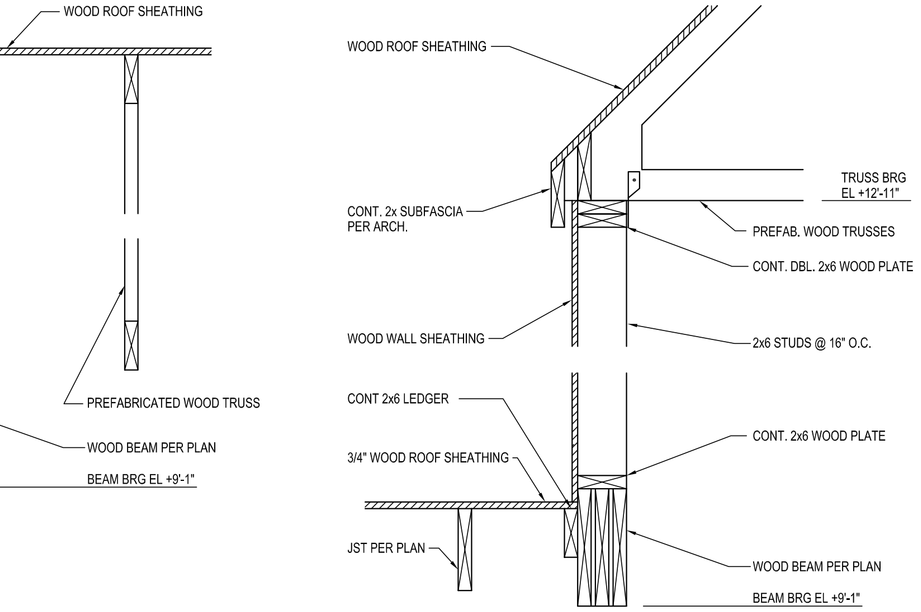


D SECTION

S401|4 1"=1'-0"

SCALE HOUSE ROOF FRAMING PLAN

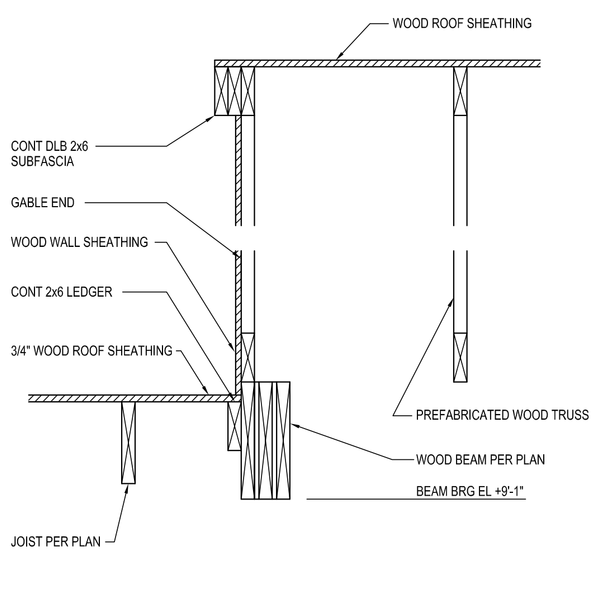
SCALE – 1/4" = 1'–0"

PLAN NOTES :

1. ROOF ELEVATIONS ARE REFERENCED TO DATUM ELEVATION 0'–0" AT THE TOP OF THE FIRST FLOOR SLAB.
2. SEE SECTIONS FOR TRUSS BEARING ELEVATIONS.
3. ROOF SHEATHING SHALL BE EXPOSURE 1, APA RATED WOOD SHEATHING. SHEATHING SHALL BE 19/32" THICK AT SLOPED ROOF AND 23/32" THICK AT FLAT ROOF. NAIL TO SUPPORTS WITH 10D COMMON NAILS AT 12 O.C.; EXCEPT ALONG PANEL EDGES, NAIL AT 6" O.C. APPLY ALL SHEATHING WITH LONG DIRECTION CONTINUOUS OVER 3 OR MORE SUPPORTS AND STAGGER SHEETS SO THAT PANEL ENDS DO NOT ALIGN.
4. PLACE ROOF SHEATHING TO PROVIDE 1/8" SPACE BETWEEN PANELS EDGES AND 1/16" SPACE BETWEEN PANEL ENDS. PLACE METAL PLY CLIPS AT 24" O.C., CENTERED BETWEEN SUPPORTS ALONG PANEL EDGES.
5. COORDINATE WITH OTHER DISCIPLINES AND TRADES FOR LOCATIONS AND DIMENSIONS OF OPENINGS, RECESSES, EMBEDMENTS AND SLEEVES.
6. SEE S1 SERIES SHEETS FOR GENERAL NOTES AND TYPICAL DETAILS. NOTES AND DETAILS SHOWN THEREIN ARE GENERALLY NOT INDICATED ON PLANS, BUT ARE INTENDED TO DEFINE GENERAL DESIGN CRITERIA AND CONSTRUCTION CONDITIONS OCCURRING THROUGHOUT THE WORK.

E SECTION

S401|1 1"=1'-0"



F SECTION

S401|1 1"=1'-0"

G SECTION

S401|5 1"=1'-0"

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55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE # C-0459

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16576 PATRICK THOMAS DUNN
08/31/10

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

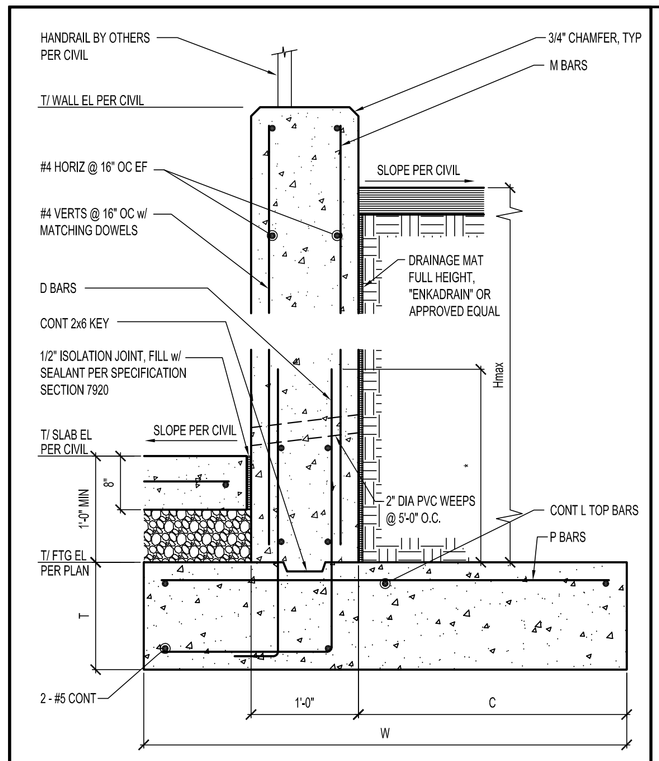
JOB NO.: 09.00728
DATE: AUGUST 31, 2010
DESIGNED BY: PTD
CADD BY: PTD
DESIGN REVIEW: ____
CONST. REVIEW: ____
FILE NAME:

SCALE HOUSE
ROOF FRAMING PLAN
AND DETAILS

Dunn Structural Engineering, P.L.L.C.
P.O. Box 1560 Phone: 828-687-9008
Arden, NC 28704 Fax: 828-687-9010

NO.	DATE	BY	REVISION DESCRIPTION

SHEET
S3

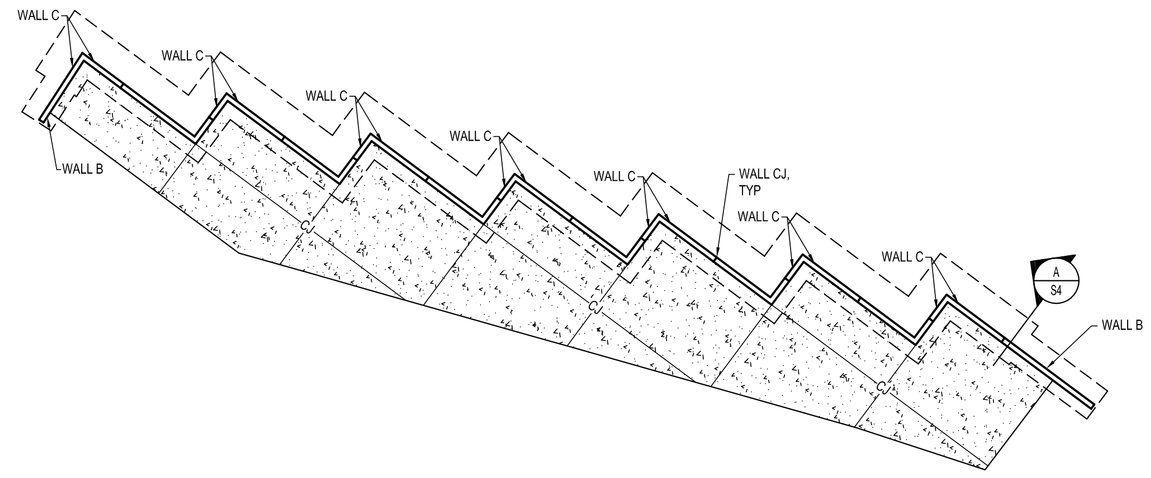


RETAINING WALL SCHEDULE								
MARK	Hmax	W	C	T	M	D	P	L
A	4'-0"	4'-3"	1'-9"	12"	-	#5 @ 16"	#4 @ 16"	2 - #5
B	7'-0"	6'-6"	3'-6"	12"	#5 @ 16"	#6 @ 16"	#4 @ 16"	4 - #5
C	9'-0"	9'-0"	5'-6"	16"	#5 @ 16"	#6 @ 8"	#7 @16"	6 - #5

* 3'-4" MIN OR FULL WALL HEIGHT WHEN NO "M" BARS SPECIFIED

A RETAINING WALL SECTION

1"=1'-0"



MSW/RECYCLING CENTER RETAINING WALL PLAN

SCALE – 1"=20'–0"

PLAN NOTES :

1. TOP OF SLAB ELEVATION VARIES PER CIVIL DRAWINGS. CONTRACTOR SHALL LOCATE FOOTING STEPS PER SECTION A/S1.0 AS REQUIRED TO MAINTAIN 1'-0" MINIMUM BETWEEN TOP OF SLAB AND TOP OF FOOTING.
2. SLAB ON GRADE CONSTRUCTION AT THE MSW/RECYCLING CENTER SHALL CONSIST OF AN 8" CONCRETE SLAB REINFORCED WITH #5 @ 18" O.C. EACH WAY AT SLAB MID-DEPTH OVER A 6" CRUSHED STONE BASE COURSE. CONTROL JOINTS ARE NOTED ON PLAN AS "CJ". PROVIDE CONSTRUCTION JOINTS AT CJ LOCATIONS AS REQUIRED. SLOPE TOP OF SLAB TO DRAIN PER CIVIL DRAWINGS.
3. REFER TO CIVIL DRAWINGS FOR DIMENSIONS OF WALLS AND SLABS.
4. SEE S1 SERIES SHEETS FOR GENERAL NOTES AND TYPICAL DETAILS. NOTES AND DETAILS SHOWN THEREIN ARE GENERALLY NOT INDICATED ON PLANS, BUT ARE INTENDED TO DEFINE GENERAL DESIGN CRITERIA AND CONSTRUCTION CONDITIONS OCCURRING THROUGHOUT THE WORK.
5. LOCATE CONTROL JOINTS IN CONCRETE WALLS AT 24'-0" O.C. MAX AND AS SHOWN IN PLAN.

Dunn Structural Engineering, P.L.L.C.
P.O. Box 1560
Arden, NC 28704
Phone: 828-687-9008
Fax: 828-687-9010

NO.	DATE	BY	REVISION DESCRIPTION

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH: (828) 252-0575 FIRM LICENSE # C-0459

NORTH CAROLINA PROFESSIONAL SEAL 16576 ENGINEER PATRICK THOMAS DUNN
08/31/10

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST 31, 2010
DESIGNED BY: PTD
CADD BY: PTD
DESIGN REVIEW: ____
CONST. REVIEW: ____
FILE NAME:

MSW/RECYCLING CENTER
RETAINING WALL

SHEET
S4

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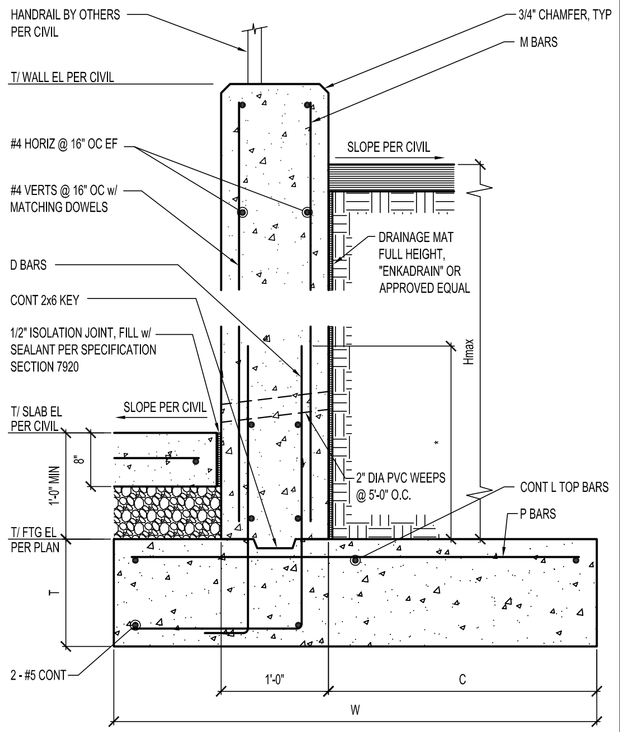
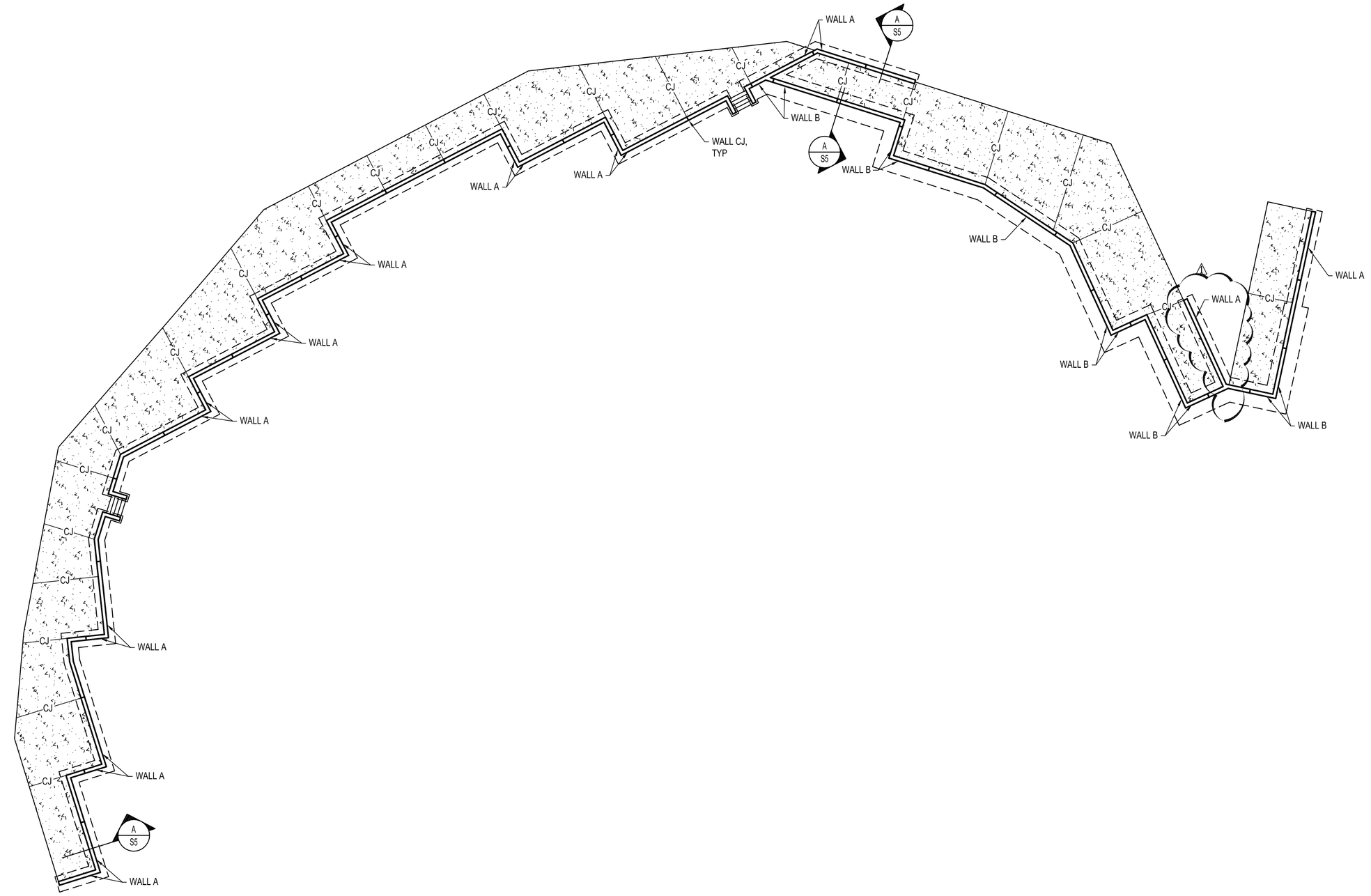


RETAINING WALL SCHEDULE								
MARK	Hmax	W	C	T	M	D	P	L
A	4'-0"	4'-3"	1'-9"	12"	-	#5 @ 16"	#4 @ 16"	2 - #5
B	7'-0"	6'-6"	3'-6"	12"	#5 @ 16"	#6 @ 16"	#4 @ 16"	4 - #5
C	9'-0"	9'-0"	5'-6"	16"	#5 @ 16"	#6 @ 8"	#7 @16"	6 - #5

* 3'-4" MIN OR FULL WALL HEIGHT WHEN NO "M" BARS SPECIFIED

A RETAINING WALL SECTION

1"=1'-0"



CONVENIENCE CENTER RETAINING WALL PLAN

SCALE – 1"=20'–0"

PLAN NOTES :

1. TOP OF SLAB ELEVATION VARIES PER CIVIL DRAWINGS. CONTRACTOR SHALL LOCATE FOOTING STEPS PER SECTION A/S1.0 AS REQUIRED TO MAINTAIN 1'-0" MINIMUM BETWEEN TOP OF SLAB AND TOP OF FOOTING.
2. SLAB ON GRADE CONSTRUCTION AT THE CONVENIENCE CENTER SHALL CONSIST OF AN 8" CONCRETE SLAB REINFORCED WITH #5 @ 18" O.C. EACH WAY AT SLAB MID-DEPTH OVER A 6" CRUSHED STONE BASE COURSE. CONTROL JOINTS ARE NOTED ON PLAN AS "CJ". PROVIDE CONSTRUCTION JOINTS AT CJ LOCATIONS AS REQUIRED. SLOPE TOP OF SLAB TO DRAIN PER CIVIL DRAWINGS.
3. REFER TO CIVIL DRAWINGS FOR DIMENSIONS OF WALLS AND SLABS.
4. SEE S1 SERIES SHEETS FOR GENERAL NOTES AND TYPICAL DETAILS. NOTES AND DETAILS SHOWN THEREIN ARE GENERALLY NOT INDICATED ON PLANS, BUT ARE INTENDED TO DEFINE GENERAL DESIGN CRITERIA AND CONSTRUCTION CONDITIONS OCCURRING THROUGHOUT THE WORK.
5. LOCATE CONTROL JOINTS IN CONCRETE WALLS AT 24'-0" O.C. MAX AND AS SHOWN IN PLAN.

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Fax: 828-687-9010

NO.	DATE	BY	REVISION DESCRIPTION
1	10-15-10		REVISED FOR REBID

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ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH: (828) 252-0575 FIRM LICENSE # C-0459

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16576 PATRICK THOMAS DUNN
10/15/10

STONEY MOUNTAIN ROAD LANDFILL
CAPITAL IMPROVEMENTS PROJECT
CONSTRUCTION PLANS
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 09.00728
DATE: AUGUST 31, 2010
DESIGNED BY: PTD
CADD BY: PTD
DESIGN REVIEW: _____
CONST. REVIEW: _____
FILE NAME:

CONVENIENCE CENTER
RETAINING WALL

SHEET
S5

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Drawing Schedule

SHEET NO.	ARCHITECTURAL
A-1	FLOORPLAN, ELEVATIONS
A-2	SECTIONS, DETAILS
A-3	DETAILS, ELEVATIONS
A-4	ROOF PLAN, REFLECTED CEILING PLAN, DETAILS
A-5	DETAILS, INTERIOR ELEVATIONS

SHEET NO.	STRUCTURAL

SHEET NO.	PLUMBING
P101	FLOOR PLAN, SCHEDULES - PLUMBING
P301	PLUMBING SPECIFICATIONS

SHEET NO.	MECHANICAL
M101	FLOOR PLAN, SCHEDULES - HVAC
M301	HVAC SPECIFICATIONS

SHEET NO.	ELECTRICAL
E100	SITE PLAN- ELECTRICAL
E101	PLANS, SCHEDULES- ELECTRICAL
E201	PANEL SCHEDULES
E301	ELECTRICAL SPECIFICATIONS

Stoney Mountain Road Landfill Facility Capital Improvements Plan -Scale House

Stoney Mountain Road
Hendersonville, North Carolina
July 29, 2010

Dechant Architecture, P.A.
760 Merrimon Avenue - Suite 103
Asheville, North Carolina 28804
Phone 828.258.9994
Fax 828.258.9970

McGill ASSOCIATES
ENGINEERING·PLANNING·FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE #C-0459

Consultants

Structural Design — Dunn Structural Engineers, Arden, North Carolina

Plumbing , Mechanical, and Electrical Design — Sims Group Consulting Engineers, Asheville, North Carolina

2009 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2 FAMILY DWELLINGS AND TOWNHOUSES)

NAME OF PROJECT: STONEY MOUNTAIN ROAD LANDFILL FACILITY CAPITAL IMPROVEMENTS PLAN -SCALE HOUSE
ADDRESS: 802 STONEY MOUNTAIN ROAD HENDERSONVILLE N.C. ZIP CODE: 28791
PROPOSED USE: SCALE HOUSE FOR LANDFILL FACILITY
OWNER/AUTHORIZED AGENT: MARCUS JONES PHONE # (828) 694-6560 E-MAIL
OWNED BY: ☒ CITY / COUNTY ☐ PRIVATE ☐ STATE
CODE ENFORCEMENT JURISDICTION: ☐ CITY ☒ COUNTY HENDERSON ☒ STATE

LEAD DESIGN PROFESSIONAL: BILL SPERRY - McGILL ASSOCIATES

DESIGNER	FIRM	NAME	LIC #	PHONE #	E-MAIL
ARCHITECTURAL	DECHANT ARCHITECTURE	WILLIAM M. DECHANT	NC-6673	(828)258-9994	
CIVIL	McGILL ASSOCIATES	BILL SPERRY		(828)252-0575	
ELECTRICAL	SIMS GROUP	RAY E. MORGAN	NC-3444	(828)251-2025	
PLUMBING	SIMS GROUP	RAY E. MORGAN	NC-3444	(828)251-2025	
MECHANICAL	SIMS GROUP	RAY E. MORGAN	NC-3444	(828)251-2025	
FIRE ALARM	SIMS GROUP	RAY E. MORGAN	NC-3444	(828)251-2025	
SPRINKLER-STANDPIPE					
STRUCTURAL					
RET. WALLS > 5' HIGH					
OTHER					

2009 EDITION OF NC CODE FOR: ☒ NEW CONSTRUCTION ☐ ADDITION ☐ UPFIT
EXISTING: ☐ RECONSTRUCTION ☐ ALTERATION ☐ REPAIR
CONSTRUCTED____ ORIGINAL USE____ RENOVATED____ CURRENT USE____

BUILDING DATA:
CONSTRUCTION TYPE: ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A ☐ I-B ☐ II-B ☐ III-B ☒ V-B
MIXED CONSTRUCTION: ☒ NO ☐ YES TYPES ____
SPRINKLERS: ☒ NO ☐ PARTIAL ☐ YES ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
STANDPIPES: ☒ NO ☐ YES CLASS ☐ I ☐ II ☐ III ☐ WET ☐ DRY
FIRE DISTRICT: ☒ NO ☐ YES FLOOD HAZARD AREA ☒ NO ☐ YES
BUILDING HEIGHT: FEET 22'-4" NUMBER OF STORIES 1
MEZZANINE: ☒ NO ☐ YES

GROSS BUILDING AREA:

FLOOR	EXISTING (SQ FT)	NEW(SQ FT)	SUBTOTAL
6TH FLOOR			
5TH FLOOR			
4TH FLOOR			
3RD FLOOR			
2ND FLOOR			
MEZZANINE			
1ST FLOOR		843	843
BASEMENT			
TOTAL		843	843

ALLOWABLE AREA
PRIMARY OCCUPANCY: ☐ ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
☒ BUSINESS ☐ EDUCATIONAL FACTORY ☐ F-1 MODERATE ☐ F-2 LOW
HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☐ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM
INSTITUTIONAL ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 USE CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ MERCANTILE RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
STORAGE ☐ S-1 MODERATE ☐ S-2 LOW ☐ HIGH-PILED
☐ UTILITY AND MISCELLANEOUS ☐ PARKING GARAGE ☐ OPEN ☐ ENCLOSED ☐ REPAIR GARAGE
SECONDARY OCCUPANCY: ____
SPECIAL USES: ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423
SPECIAL OCCUPANCY: ☐ 504.2 ☐ 504.3 ☐ 504.4 ☐ 504.5 ☐ 504.6 ☐ 504.7 ☐ 504.8

MIXED OCCUPANCY ☒ NO ☐ YES SEPERATION: ____ HR. EXCEPTION: ____
☐ INCIDENTAL USE SEPARATION (508.2) THIS SEPERATION IS NOT EXEMPT AS A NON-SEPERATED USE(SEE EXCEPTIONS).
☐ NON-SEPARATED USE (508.3.2) THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.
☐ SEPARATED USE (508.3.3) - SEE BELOW FOR AREA CALCULATIONS FOR EACH STORY, THE AREA OF THE OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.
ACTUAL AREA OF OCCUPANCY A / ALLOWABLE AREA OF OCCUPANCY A + ACTUAL AREA OF OCCUPANCY B / ALLOWABLE AREA OF OCCUPANCY B ≤ 1
____ + ____ = 1.1 ≤ 1.00

STORY NO.	DESCRIPTION AND USE	BLDG AREA PER STORY (ACTUAL)	TABLE 503[5] AREA	AREA FOR FRONTAGE INCREASE[1]	AREA FOR SPRINKLER INCREASE[2]	ALLOWABLE AREA OR UNLIMITED[3]	MAX. BLDG. AREA[4]
1	BUSINESS	843	9,000	N/A	N/A	9,000	843

1 FRONTAGE AREA INCREASES FROM SECTION 506.2 ARE COMPUTED THUS:
A. PERIMETER WHICH FRONTS A PUB. WAY OR OPEN SPACE HAV'G 20 FT. MIN. WIDTH= N/A(F)
B. TOTAL BUILDING PERIMETER = N/A (P)
C. RATIO (F/P) = N/A (F/P)
D. W = MINIMUM WIDTH OF PUBLIC WAY = N/A (W)
E. PERCENT OF FRONTAGE INCREASE If = 100 [F/P - 0.25] X W/30 = N/A (%)
2 THE SPRINKLER INCREASE PER SECTION 506.3 IS AS FOLLOWS:
A. MULTI STORY BUILDING I = 200 %
B. SINGLE STORY BUILDING I = 300 %
3. UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTIONS GROUP B,F,M,S,A-4 (507.1, 507.2,507.3,507.5); GROUP A MOTION PICTURE(507.8); MALLS (402.6); AND H-2 AIRPLANE HANGERS(507.6).
4. MAXIMUM BUILDING AREA = TOTAL # OF STORIES IN THE BUILDING X E (506.4).
5. THE MAXIMUM AREA OF PARKING GARAGES MUST COMPLY WITH 406.3.5. THE MAXIMUM AREA OF AIR TRAFFIC CONTROL TOWERS MUST COMPLY WITH 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
TYPE OF CONSTRUCTION	TYPE V-B	N/A	TYPE V-B	
BUILDING HT. IN FT.	FT.= 55	FT.= H + 20' = NA	22'-4"	
BUILDING HT. IN STORIES	STORIES= 4	STORIES + 1 = N/A	STORIES= 1	

FIRE PROTECTION REQUIREMENTS
LIFE SAFETY PLAN SHEET #, IF PROVIDED ____

BUILDING ELEMENT	FIRE SEPARATION DISTANCE	RATING REQ'D	RATING PROVIDED	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
STRUCTURAL FRAME							
BEARING WALLS							
EXTERIOR-NORTH		N/A	N/A				
EXTERIOR-EAST		N/A	N/A				
EXTERIOR-WEST		N/A	N/A				
EXTERIOR-SOUTH		N/A	N/A				
INTERIOR		N/A	N/A				
NON-BEARING WALLS&PARTITIONS							
EXTERIOR-NORTH		N/A	N/A				
EXTERIOR-EAST		N/A	N/A				
EXTERIOR-WEST		N/A	N/A				
EXTERIOR-SOUTH		N/A	N/A				
INTERIOR		N/A	N/A				
FLOOR CONSTRUCTION		N/A	N/A				
ROOF CONSTRUCTION		N/A	N/A				
SHAFTS-EXIT		N/A	N/A				
SHAFTS-OTHER		N/A	N/A				
CORRIDOR SEPARATION		N/A	N/A				
OCCUPANCY SEPARATION		N/A	N/A				
FIRE WALL SEPARATION		N/A	N/A				
SMOKE BAR.SEPARATION		N/A	N/A				
TENANT SEPARATION		N/A	N/A				
INCIDENTAL USE SEP.		N/A	N/A				

LIFE SAFETY SYSTEM REQUIREMENTS
EMERGENCY LIGHTING: ☐ NO ☒ YES
EXIT SIGNS: ☐ NO ☒ YES
FIRE ALARM: ☒ NO ☐ YES
SMOKE DETECTION SYSTEMS: ☐ NO ☒ YES ☐ PARTIAL ____
PANIC HARDWARE: ☒ NO ☐ YES

EXIT REQUIREMENTS
NUMBER AND ARRANGEMENT OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NUMBER OF EXITS REQUIRED	SHOWN ON PLANS	TRAVEL DISTANCE ALLOWABLE (TABLE 1015.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	ARRANGEMENT MEANS OF EGRESS[1,3] (SECTION 1015.2) REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
1- BUSINESS	1	1	200'	40'	N/A	N/A

1. CORRIDOR DEAD ENDS (SECTION 1017.3)
2. BUILDINGS WITH SINGLE EXITS (TABLE 1014.2), SPACES W/ONE MEANS OF EGRESS (TABLE 1015.1)
3. COMMON PATH OF TRAVEL (SECTION 1014.3)

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a) AREA[1] SQ. FT.	(b) AREA PER OCCUPANT (TABLE 1004.1.1)	CALCULATED OCCUPANT LOAD (a/b)	(c) EGRESS WIDTH PER OCCUPANT (TABLE 1005.1) STAIR	(c) LEVEL	EXIT WIDTH (IN)[2,3,4,5,6] REQUIRED WIDTH (SECTION 1005.1) (a / b) X c STAIR	LEVEL	ACTUAL WIDTH SHOWN ON PLANS STAIR	LEVEL
1- BUSINESS	843	VARIES	9	N/A	0.2	N/A	.18	N/A	36

1. SEE TABLE 1004.1.1 TO DETERMINE WHETHER NET OR GROSS AREA IS APPLICABLE. SEE DEFINITION "AREA, NET" (SECTION 1002)
2. MINIMUM STAIRWAY WIDTH (SECTION 1009.1); MIN. CORRIDOR WIDTH (SECTION 1017.2); MIN. DOOR WIDTH (SECTION 1008.1)
3. MINIMUM WIDTH OF EXIT PASSAGEWAY (SECTION 1021.2)
4. SEE SECTION 1004.5 FOR CONVERGING EXITS.
5. THE LOSS OF ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50 PERCENT OF THE TOTAL REQUIRED (SECTION 1005.1)
6. ASSEMBLY OCCUPANCIES (SECTION 1025)

STRUCTURAL DESIGN
DESIGN LOADS:
IMPORTANCE FACTORS: WIND (Iw) 1.0; SNOW (Is) 1.0; SEISMIC (Ie) 1.0
LIVE LOADS: ROOF 25 PSF; MEZZANINE ____ PSF; FLOOR 100 PSF (SLAB ON GRADE)
GROUND SNOW LOAD: 15 PSF
WIND LOAD: BASIC WIND SPEED 90 MPH (ASCE-7-02); EXPOSURE CATEGORY C; WIND BASE SHEARS (FOR MWFRS) Vx = 2.3K Vy = 5.7K

SEISMIC DESIGN CATEGORY ☐ A ☐ B ☐ C ☒ D
PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
OCCUPANCY CATEGORY (TABLE 1604.5) ☐ I ☒ II ☐ III ☐ IV
SPECTRAL RESPONSE ACCELERATION Sms 55.9 %g Sm1 25.1 %g
SITE CLASSIFICATION D ☐ FIELD TEST ☐ PRESUMPTIVE ☐ HISTORICAL DATA
BASIC STRUCTURAL SYSTEM
X BEARING WALL ____ DUAL W/SPECIAL MOMENT FRAME
____ BUILDING FRAME ____ DUAL W/INTERMEDIATE R/C OR SPECIAL STEEL
____ MOMENT FRAME ____ INVERTED PENDULUM
SEISMIC BASE SHEAR Vx= 5.6 K Vy= 5.6 K
ANALYSIS PROCEDURE ____ SIMPLIFIED X EQUIVALENT LATERAL FORCE ____ MODAL
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? YES, PER ASCE-7 2005 CH. 13
LATERAL DESIGN CONTROL: EARTHQUAKE X WIND Y
SOIL BEARING CAPACITIES:
FIELD TEST(PROVIDE COPY OF TEST REPORT) 2000 PSF
PRESUMPTIVE BEARING CAPACITY ____ PSF
PILE SIZE, TYPE, AND CAPACITY ____

PLUMBING FIXTURE REQUIREMENTS

USE		WATERCLOSETS MALE	WATERCLOSETS WOMEN	URINALS	LAVATORIES MALE	LAVATORIES WOMEN	SHOWERS/TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING								
	NEW	1		0	1		0	0	0
	REQUIRED	1		0	1		0	0	0

ACCESSIBLE PARKING

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	PROVIDED	# OF ACCESSIBLE SPACES PROVIDED REGULAR W/ 5' ACCESS AISLE	VAN SPACES W/ 8' ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
TOTAL					

SPECIAL APPROVALS
SPECIAL APPROVAL: (LOCAL JURISDICATION, NCDOI, OSC, DPI, DFS, ICC, ETC., DESCRIBE BELOW)

ENERGY SUMMARY
ENERGY REQUIREMENTS:
THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE ENERGY CODE SHALL ALSO BE RPOVIDED. EACH DESIGNER SHALL FURNISH THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF ENERGY COST BUDGET METHOD, STATE THE ANNUAL ENERGY COST BUDGET VS. ALLOWABLE ANNUAL ENERGY COST BUDGET.

THERMAL ENVELOPE
METHOD OF COMPLIANCE:
☒ PRESCRIPTIVE ____ % GLAZED WALL AREA
☐ PERFORMANCE ☐ ENERGY COST BUDGET

ROOF/CEILING ASSEMBLY (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY - SEE DETAIL A/ A-5
U-VALUE OF TOTAL ASSEMBLY U = .05
R-VALUE OF INSULATION R-38
SKYLIGHTS IN EACH ASSEMBLY N/A
U-VALUE OF SKYLIGHT N/A
TOTAL SQFT.OF SKYLIGHTS IN EACH ASSEMBLY N/A

EXTERIOR WALLS (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY SEE DETAIL 1/ A-2
U-VALUE OF TOTAL ASSEMBLY U = .40
R-VALUE OF INSULATION 0
OPENINGS (WINDOWS OR DOORS WITH GLAZING)
U-VALUE OF ASSEMBLY .5
SHADING COEFFICIENT
PROJECTION FACTOR
LOW E REQUIRED, IF APPLICABLE
DOOR R-VALUES .5

WALLS ADJACENT TO UNCONDITIONED SPACE (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY N/A
U-VALUE OF TOTAL ASSEMBLY
R-VALUE OF INSULATION
OPENINGS (WINDOWS OR DOORS WITH GLAZING)
U-VALUE OF ASSEMBLY
LOW E REQUIRED, IF APPLICABLE
DOOR R-VALUES

WALLS BELOW GRADE (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY N/A
U-VALUE OF TOTAL ASSEMBLY
R-VALUE OF INSULATION

FLOORS OVER UNCONDITIONED SPACE (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY N/A
U-VALUE OF TOTAL ASSEMBLY
R-VALUE OF INSULATION

FLOORS SLAB ON GRADE
DESCRIPTION OF ASSEMBLY 4" CONCRETE
U-VALUE OF TOTAL ASSEMBLY U=1.25
R-VALUE OF INSULATION R-0
HORIZONTAL/VERTICLE REQUIREMENT NONE
SLAB HEATED NO

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT
METHOD OF COMPLIANCE:
☒ PRESCRIPTIVE ☐ PERFORMANCE ☐ ENERGY COST BUDGET

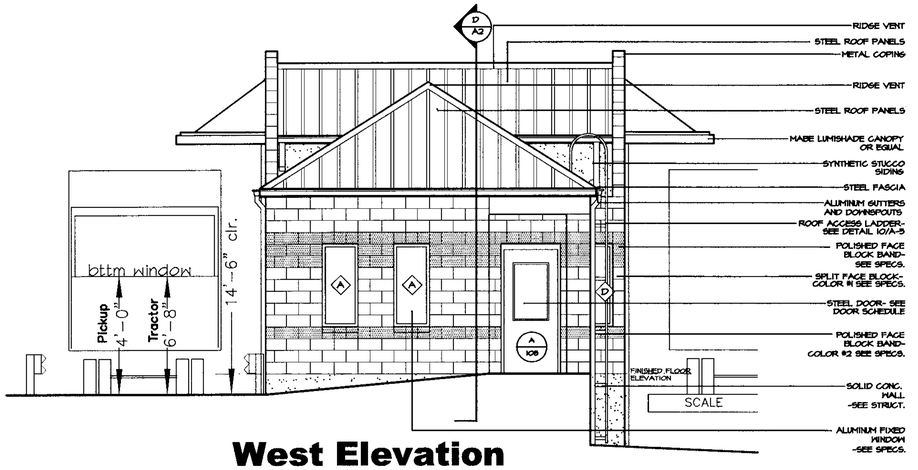
LIGHTING SCHEDULE
LAMP TYPE REQUIRED IN FIXTURE
NUMBER OF LAMPS IN FIXTURE
BALLAST TYPE USED IN THE FIXTURE
NUMBER OF BALLASTS IN FIXTURE
TOTAL WATTAGE PER FIXTURE
TOTAL INT. WATTAGE SPECIFIED VS ALLOWED 1132/1084
TOTAL EXT. WATTAGE SPECIFIED VS ALLOWED 564/707

EQUIPMENT SCHEDULES WITH MOTORS(NOT USED FOR MECH. SYSTEMS)
MOTOR HORSEPOWER N/A
NUMBER OF PHASES N/A
MINIMUM EFFICIENCY N/A
MOTOR TYPE N/A
NUMBER OF POLES N/A

MECHANICAL SUMMARY

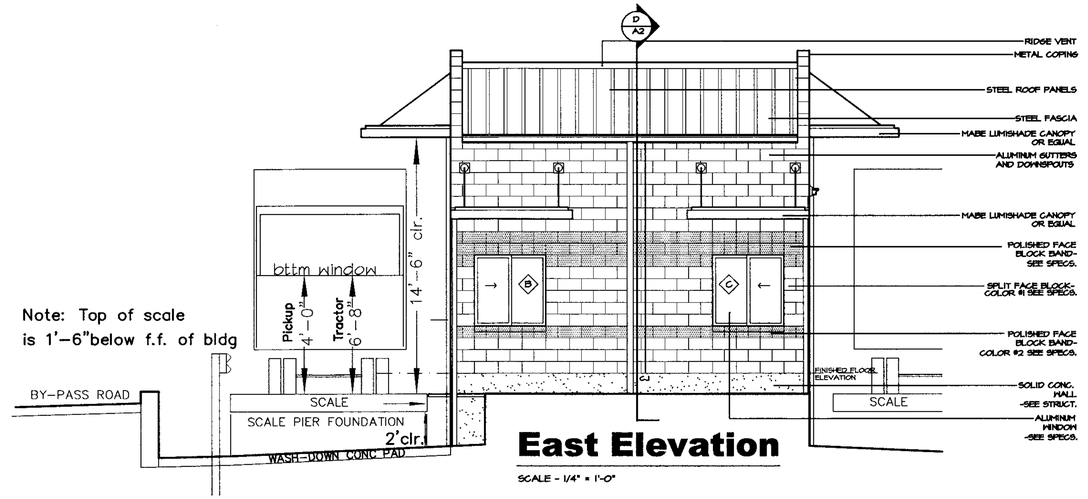
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
METHOD OF COMPLIANCE:
☒ PRESCRIPTIVE ☐ PERFORMANCE ☐ ENERGY COST BUDGET

THERMAL ZONE 4
WINTER DRY BULB 11°F
SUMMER DRY BULB 85°F
INTERIOR DESIGN CONDITIONS
WINTER DRY BULB 70°F
SUMMER DRY BULB 75°
RELATIVE HUMIDITY 50%
BUILDING HEATING LOAD 34100 BTUH
BUILDING COOLING LOAD 2.5 TONS
MECHANICAL SPACING CONDITION SYSTEMS
UNITARY
DESCRIPTION OF UNIT ROOF TOP PACKAGED
HEATING EFFICIENCY HEAT PUMP
COOLING EFFICIENCY
HEAT OUTPUT OF UNIT
COOLING OUTPUT OF UNIT
BOILER N/A
TOTAL BOILER OUTPUT. IF OVERSIZED, STATE REASON.
CHILLER N/A
TOTAL CHILLER CAPACITY. IF OVERSIZED, STATE REASON.
LIST EQUIPMENT EFFICIENCIES SEE SCHEDULE DRAWING M101
EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS)
MOTOR HORSEPOWER SEE SCHEDULE DRAWING M101
NUMBER OF PHASES SEE SCHEDULE DRAWING M101
MINIMUM EFFICIENCY SEE SCHEDULE DRAWING M101
MOTOR TYPE SEE SCHEDULE DRAWING M101
NUMBER OF POLES SEE SCHEDULE DRAWING M101



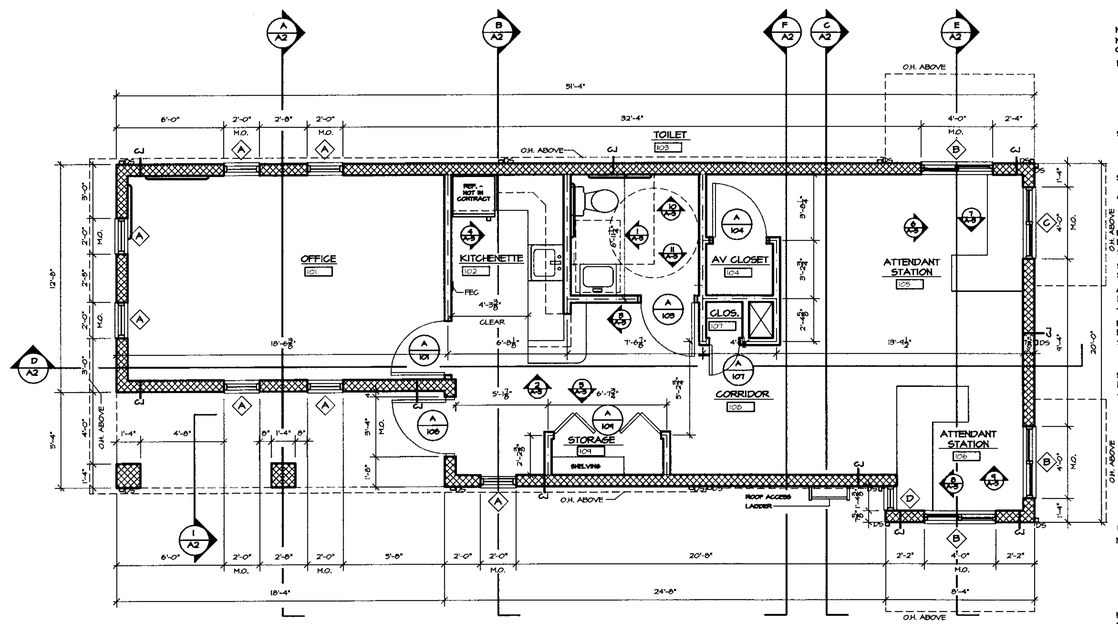
West Elevation

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



East Elevation

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



Floor Plan

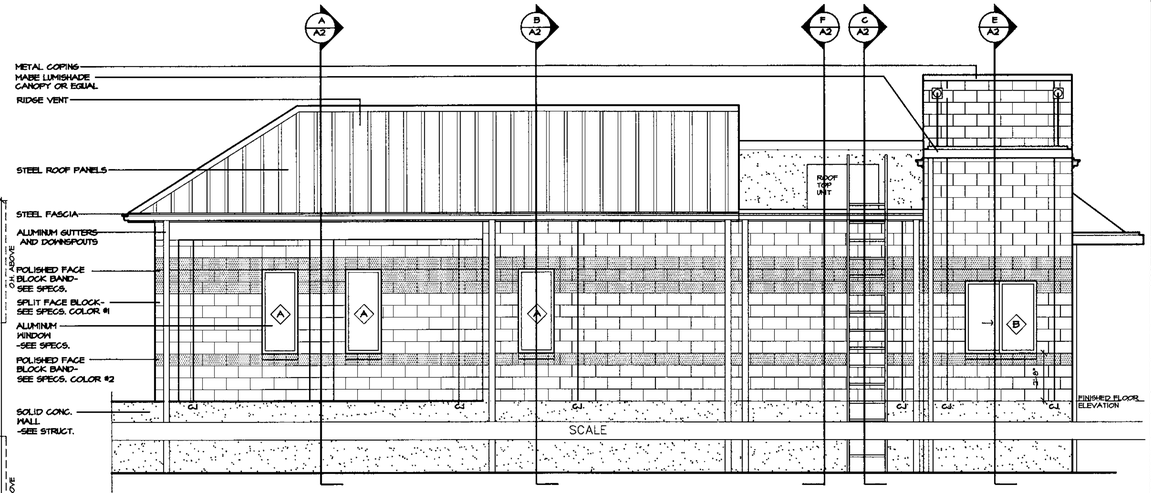
SCALE - 1/4" = 1'-0"

PLAN NOTES :

1. C.J. INDICATES MASONRY CONTROL JOINTS. SEE STRUCT. DWGS FOR LOCATION.
2. PROVIDE SOLID WOOD BLOCKING BEHIND ALL DOOR STOPS & TOILET ACCESSORIES ON GYPSUM AND METAL STUD WALLS.
3. FIRE EXTINGUISHER CABINETS ARE INDICATED AS FEC
4. UNLESS OTHERWISE SPECIFIED, ALL GYPSUM AND METAL STUD WALLS SHALL RECEIVE SOUND ATTENUATION BLANKETS.
5. ○D.S. INDICATES DOWNSPOUT LOCATIONS.

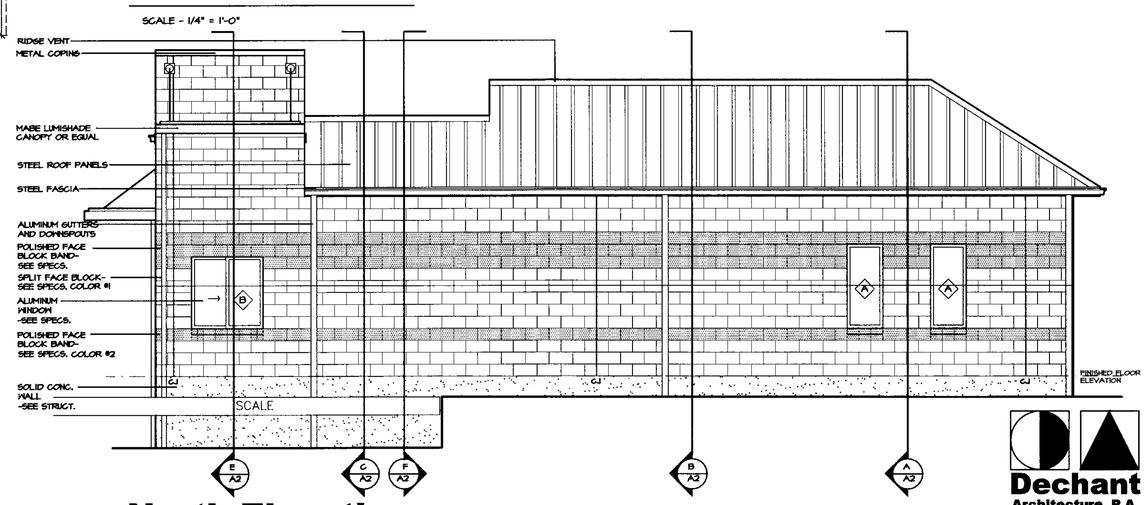
LEGEND:

- SOLID CONCRETE
- CONCRETE MASONRY UNITS
- BRICK
- EARTH
- ONE-HOUR RATED WALL
- WALL TAG
- ROOM IDENTIFYING TAG
- DOOR TAG- TOP FIGURE= DOOR IDENTIFYING LETTER; BOTTOM FIGURE= ROOM DOOR IS LOCATED
- SECTION MARK- TOP FIGURE= SECTION IDENTIFIER; BOTTOM FIGURE= SHEET WHERE SECTION IS SHOWN
- INDICATES WINDOW TYPE, SEE WINDOW SCHEDULE
- INDICATES FIN. FLOOR OR GRADE ELEVATIONS. 56.03
- INDICATES ELECTIC WATER COOLER EWC.



South Elevation

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



North Elevation

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

McGill Associates
ENGINEERING · PLANNING · FINANCE
55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE #C-0459

WILLIAM M. DECHANT REGISTERED ARCHITECT #6878 ASHEVILLE, N.C. 10/14/10

STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN

HENDERSON COUNTY

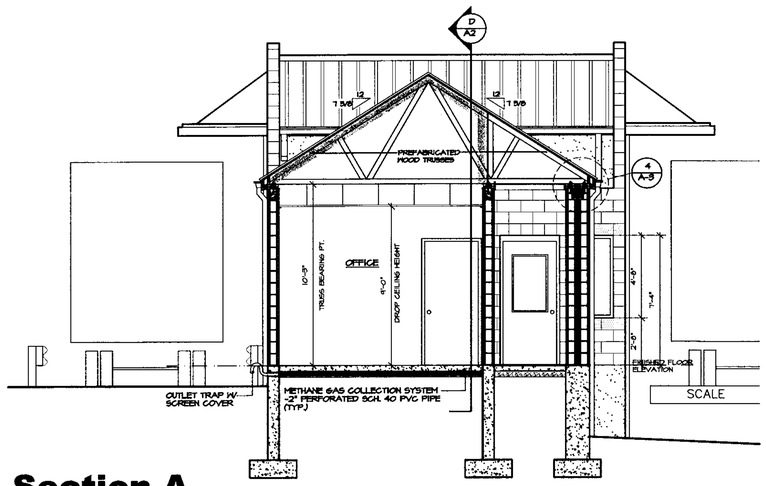
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
DATE: 10/14/10
SCALE: AS NOTED
DESIGNED BY: WMD
CADD BY: WMD
DESIGN REVIEW: ——
CONST. REVIEW: ——

SCALE HOUSE
FLOOR PLAN & ELEVATIONS

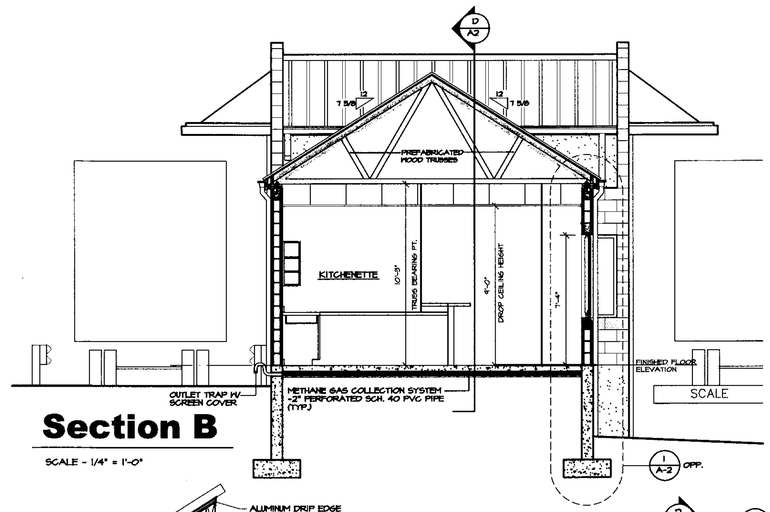
Dechant Architecture, P.A.
760 Merrimon Ave. Suite 103
Asheville, North Carolina 28804
Phone 828.258.9994
Fax 828.258.9970

SHEET
A1



Section A

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

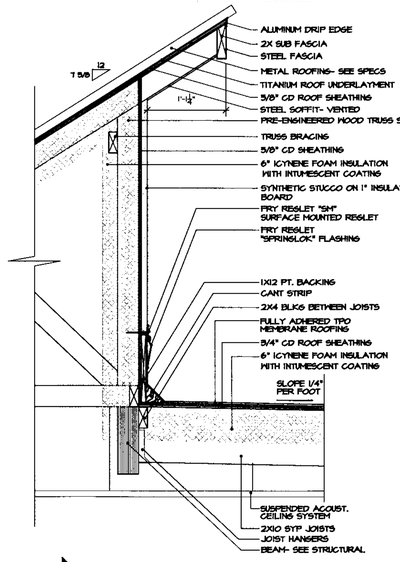


Section B

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

Section C

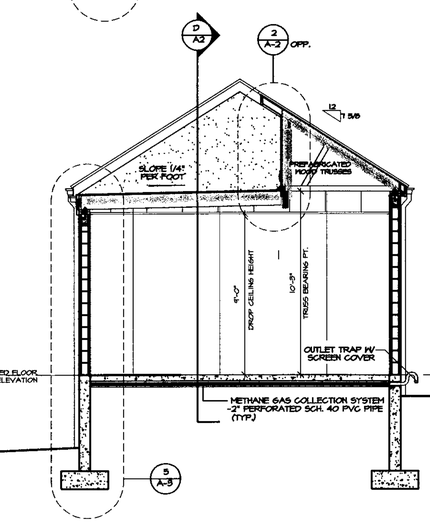
SCALE - 1/4" = 1'-0"



Detail

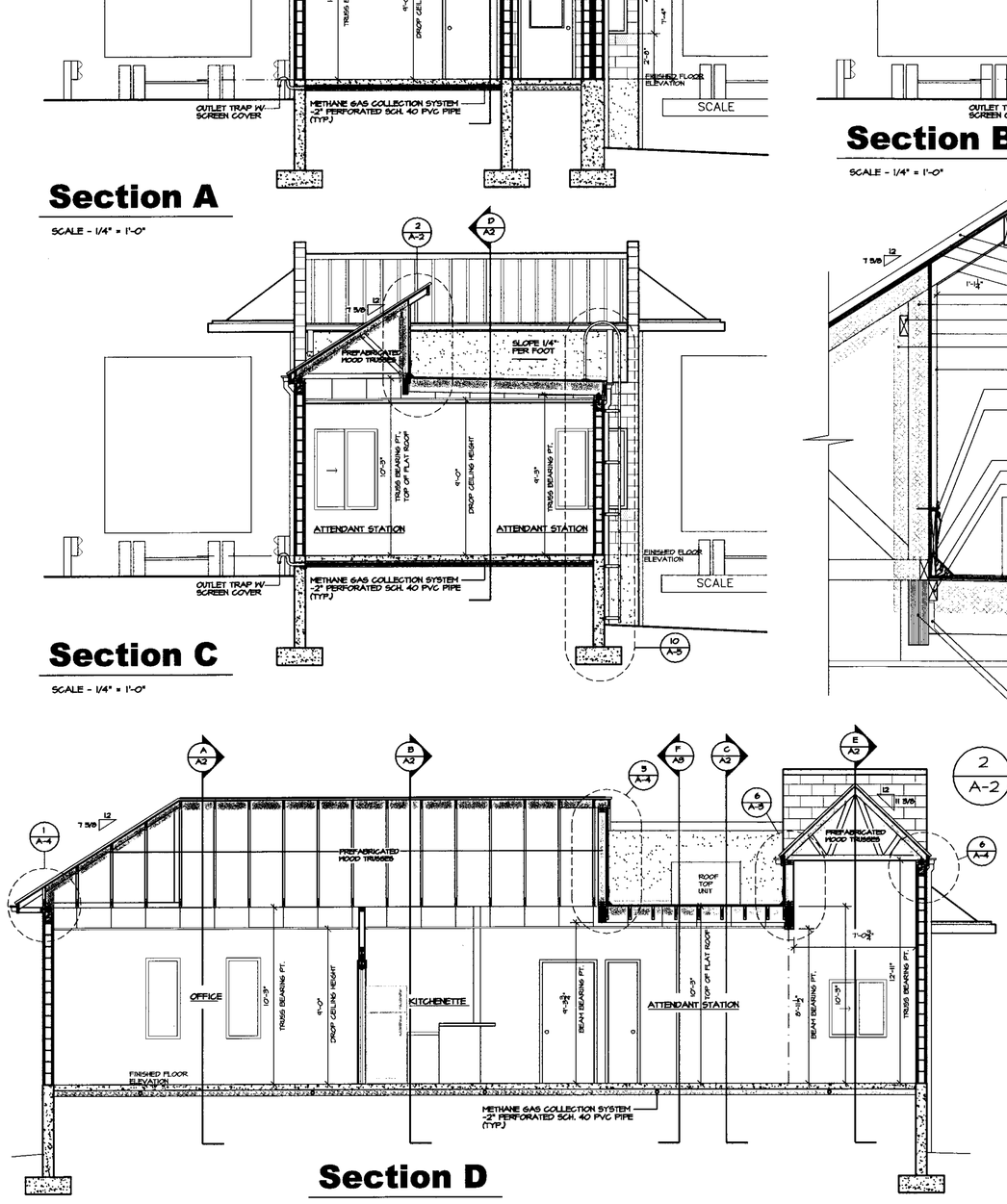
2 A-2

SCALE - 1" = 1'-0"



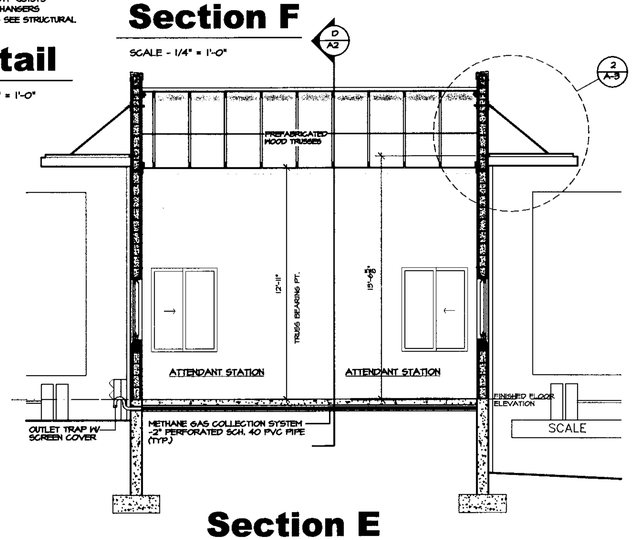
Section F

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



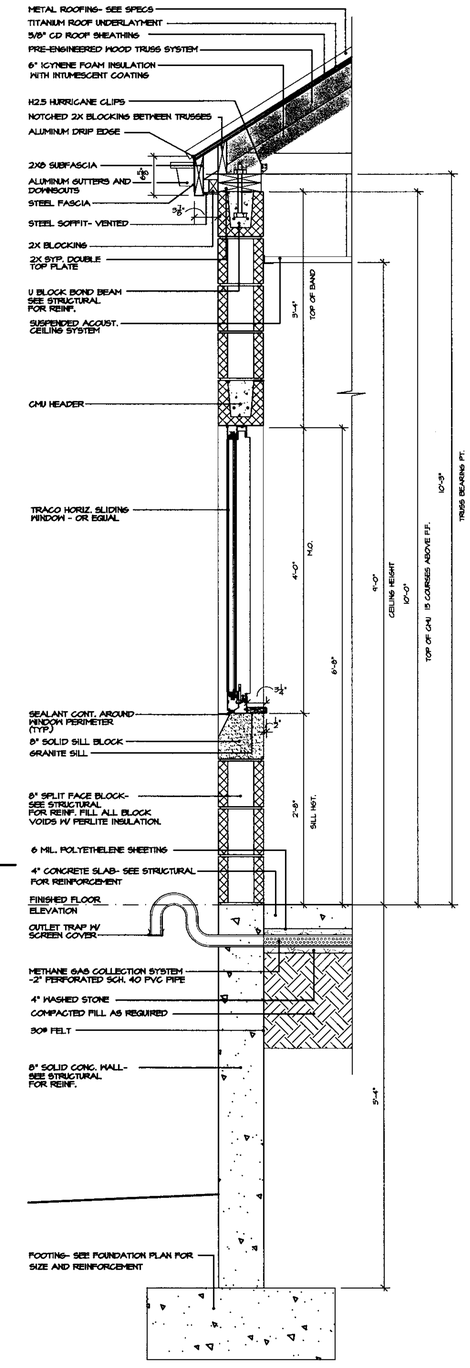
Section D

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



Section E

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



Wall Section

1 A-2

SCALE - 1" = 1'-0"

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STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN

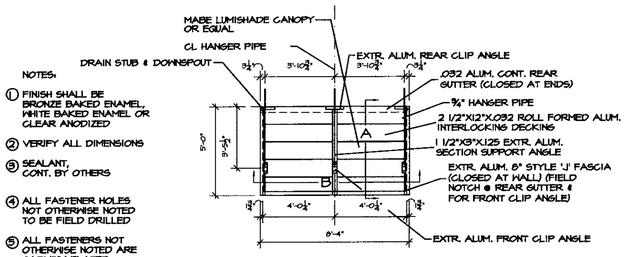
HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
DATE: 7/29/10
SCALE: AS NOTED
DESIGNED BY: WMD
CADD BY: WMD
DESIGN REVIEW: ——
CONST. REVIEW: ——

SCALE HOUSE FLOOR PLAN & ELEVATIONS

SHEET
A2

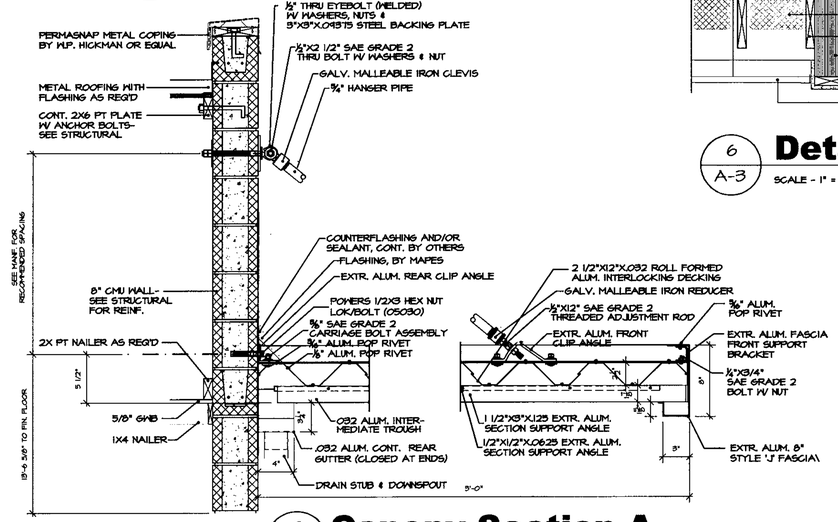


NOTES:

1. FINISH SHALL BE BRONZE BAKED ENAMEL, WHITE BAKED ENAMEL OR CLEAR ANODIZED
2. VERIFY ALL DIMENSIONS
3. SEALANT, CONT. BY OTHERS
4. ALL FASTENER HOLES NOT OTHERWISE NOTED TO BE FIELD DRILLED
5. ALL FASTENERS NOT OTHERWISE NOTED ARE CADMIUM PLATED FERROUS OR ALUMINUM

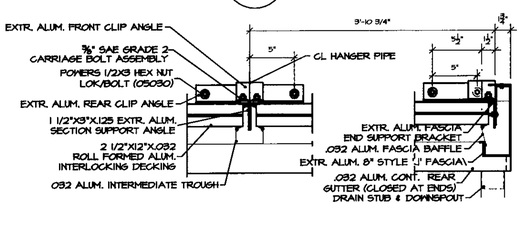
1 / A-3 Canopy Plan

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



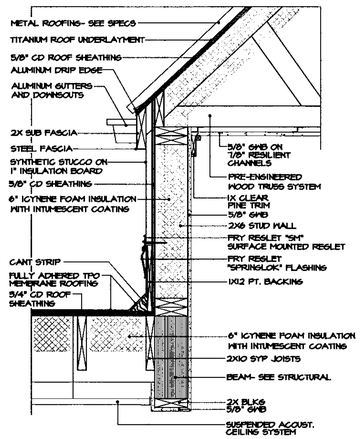
2 / A-3 Canopy Section A

SCALE : 1"=1'-0"



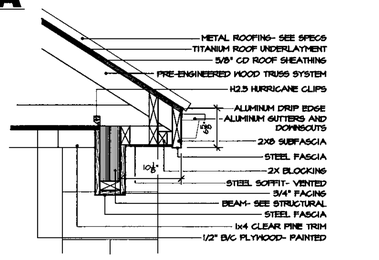
3 / A-3 Canopy Section B

SCALE : 8"=1'-0"



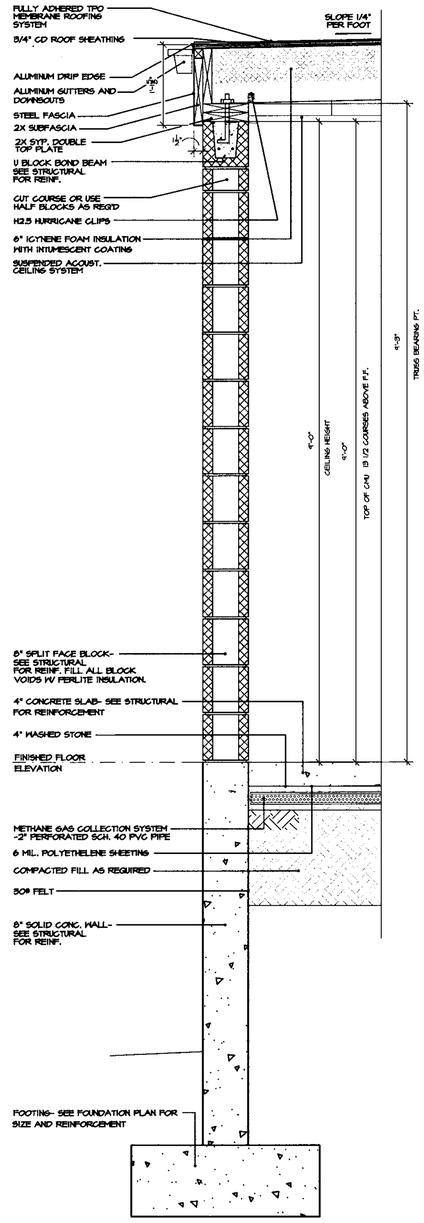
6 / A-3 Detail

SCALE - 1" = 1'-0"



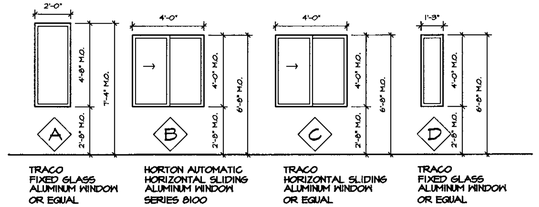
4 / A-3 Beam Detail

SCALE - 1" = 1'-0"



5 / A-3 Wall Section

SCALE - 1" = 1'-0"



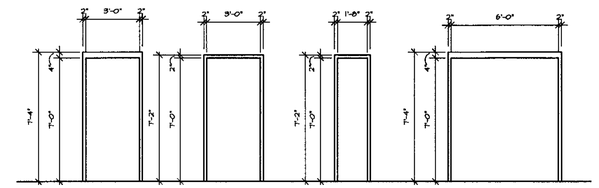
EXTERIOR WINDOW ELEVATIONS

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

DOOR SCHEDULE

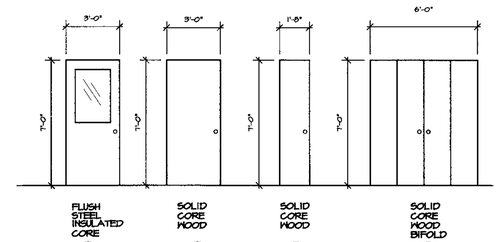
DOORS

DOOR NO.	DOOR TYPE	DOOR SIZE	HEAD	JAMB	FRAME	THRESHOLD	HARDWARE	LABEL	REMARKS
A101	B	3'-0" X 7'-0"	2	2	A				
A103	B	3'-0" X 7'-0"	2	2	A				
A104	B	3'-0" X 7'-0"	2	2	A				
A107	C	1'-8" X 7'-0"	2	2	B				
A108	A	3'-0" X 7'-0"	1	1	C	A			
A109	D	6'-0" X 7'-0"	2	2	D				



DOOR FRAME ELEVATIONS

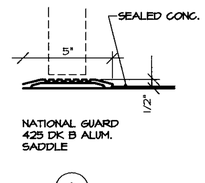
SCALE - 1/4" = 1'-0"



DOOR ELEVATIONS

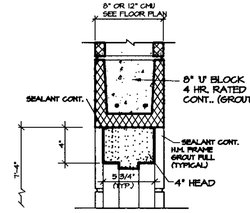
SCALE - 1/4" = 1'-0"

NOTE : ALL GLASS IN DOORS IS TO BE 1/4" TEMPERED.



THRESHOLD DETAILS

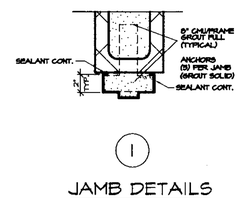
SCALE - 3" = 1'-0"



HEAD DETAILS

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

NOTE - CAULK PERIMETER OF ALL HOLLOW METAL FRAMES - TYPICAL



JAMB DETAILS

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

NOTE - CAULK PERIMETER OF ALL HOLLOW METAL FRAMES - TYPICAL

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR FINISH	FLOOR BASE	WALL FINISH	CEILING MATERIAL	CEILING GRID	CEILING CLG. HT.	REMARKS
101	OFFICE	POLISHED CONC.	4" RUBBER	EXPOSED STRUCT./ GWB	ACOUSTIC TILE		9'-0"	
102	KITCHENETTE	POLISHED CONC.	4" RUBBER	EXPOSED STRUCT./ GWB	ACOUSTIC TILE		9'-0"	
103	TOILET	POLISHED CONC.	4" RUBBER	EXPOSED STRUCT./ GWB	ACOUSTIC TILE		9'-0"	
104	AV CLOSET	POLISHED CONC.	4" RUBBER	GWB	ACOUSTIC TILE		9'-0"	
105	ATTENDANT STATION	POLISHED CONC.	4" RUBBER	EXPOSED STRUCT./ GWB	ACOUSTIC TILE/ GWB		VARIES	
106	ATTENDANT STATION	POLISHED CONC.	4" RUBBER	EXPOSED STRUCT./ GWB	ACOUSTIC TILE/ GWB		VARIES	
107	CLOS.	POLISHED CONC.	4" RUBBER	GWB	ACOUSTIC TILE		9'-0"	
108	CORRIDOR	POLISHED CONC.	4" RUBBER	EXPOSED STRUCT./ GWB	ACOUSTIC TILE		9'-0"	
109	STORAGE	POLISHED CONC.	4" RUBBER	EXPOSED STRUCT./ GWB	ACOUSTIC TILE		9'-0"	

McGill Associates
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55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE #C-0459

WILLIAM M. DECHANT REGISTERED ARCHITECT #6673 ASHEVILLE 5/5/10

STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN

HENDERSON COUNTY

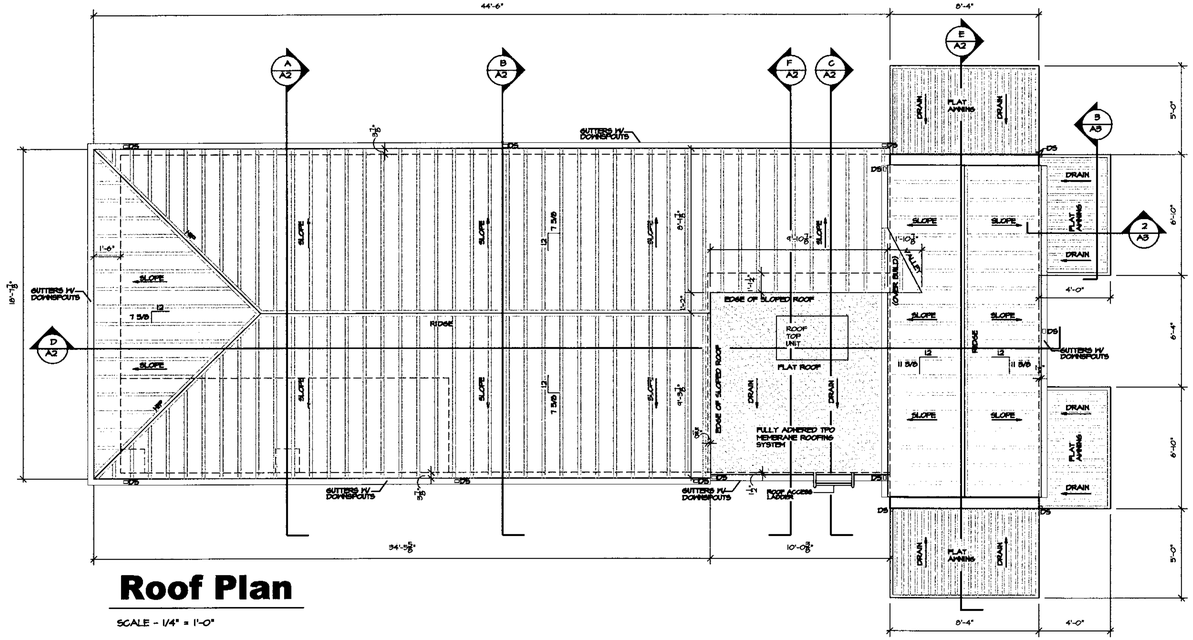
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
DATE: 7/29/10
SCALE: AS NOTED
DESIGNED BY: WMD
CADD BY: WMD
DESIGN REVIEW: _____
CONST. REVIEW: _____

SCALE HOUSE FLOOR PLAN & ELEVATIONS

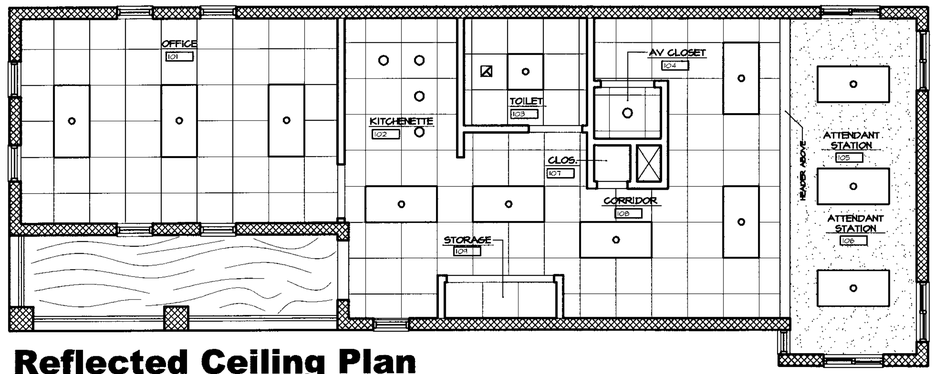
SHEET
A3

Dechant Architecture, P.A.
760 Merrimon Ave. Suite 103
Asheville, North Carolina 28804
Phone 828.258.9994
Fax 828.258.9970



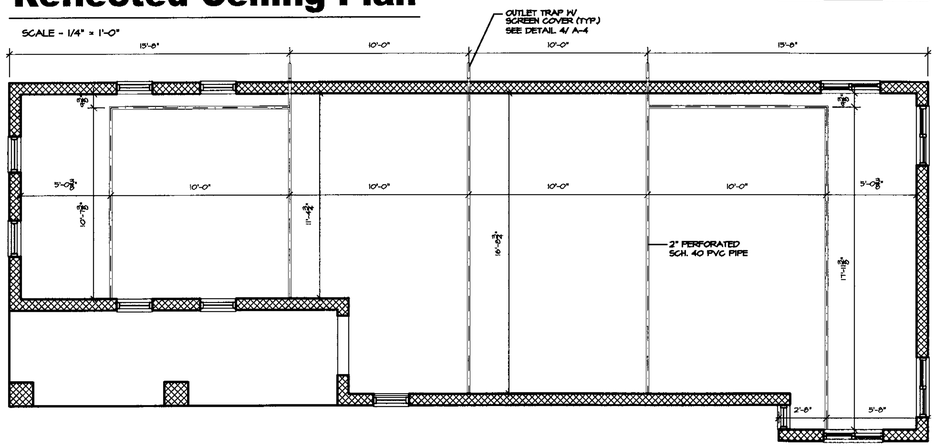
Roof Plan

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



Reflected Ceiling Plan

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

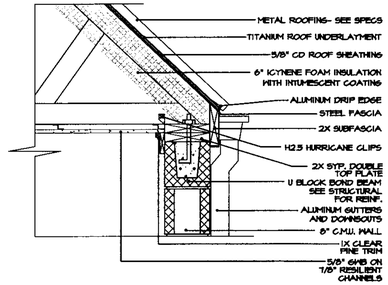


Methane Gas Collection System

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

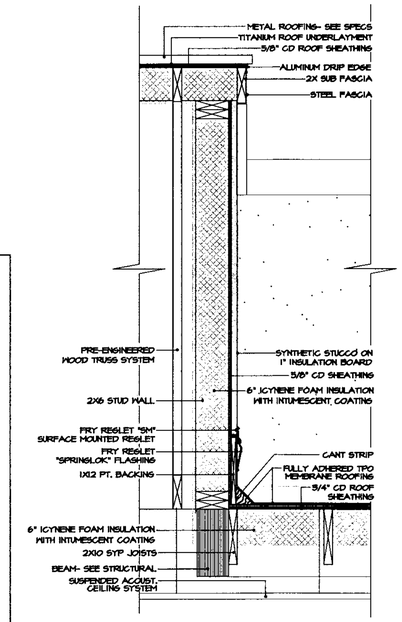
Legend

- 2 x 2 ACOUSTICAL CEILING GRID
- 5/8" GYPSUM BOARD
- 1/2" BC PLYWOOD- PAINTED
- 2' X 4' LAY-IN FLUORESCENT LIGHT FIXTURE
- 2' X 2' LAY-IN FLUORESCENT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- WALL MOUNT FLUORESCENT FIXTURE
- ELECTRIC FAN



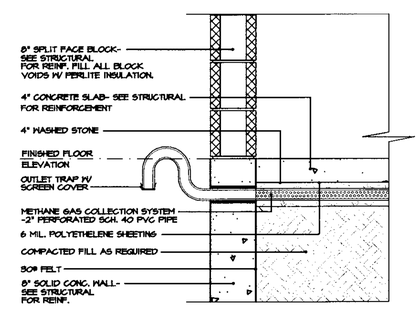
6 / A-4 **Detail**

SCALE - 1" = 1'-0"



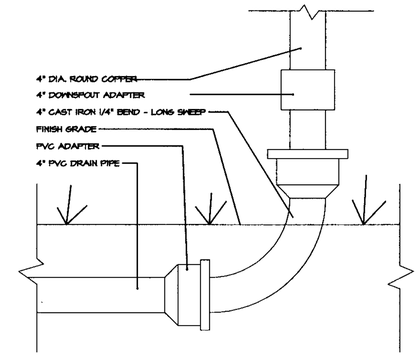
5 / A-4 **Detail**

SCALE - 1" = 1'-0"



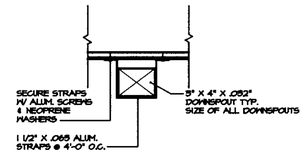
4 / A-4 **Detail**

SCALE - 1" = 1'-0"



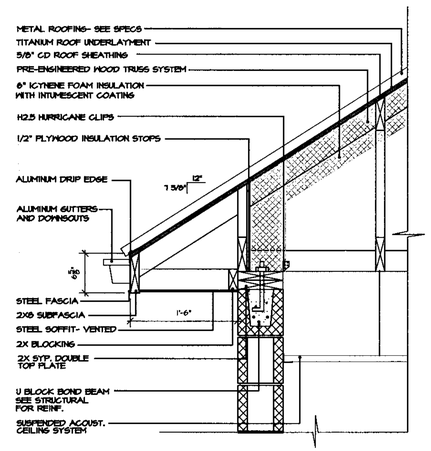
1 / A-4 **Downspout Boot Detail**

NOT TO SCALE



2 / A-4 **Downspout Hanger Detail**

NOT TO SCALE



3 / A-4 **Detail**

SCALE - 1" = 1'-0"

McGill Associates
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STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN

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SCALE HOUSE FLOOR PLAN & ELEVATIONS

SHEET A4

Dechant Architecture, P.A.
760 Merrimon Ave. Suite 103
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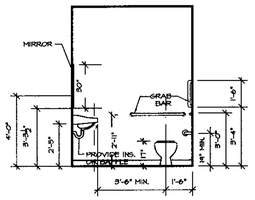
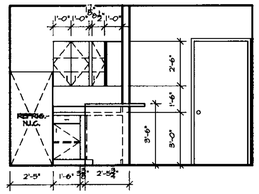
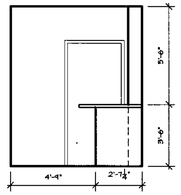


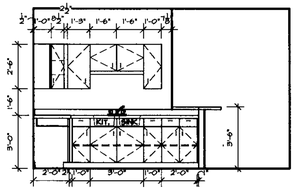
1 / A-5 TOILET RM 103
1/4" = 1'-0"



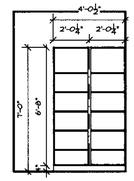
2 / A-5 KITCHENETTE RM. 123
1/4" = 1'-0"



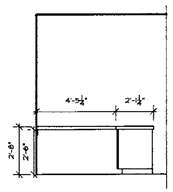
3 / A-5 KITCHENETTE RM. 123
1/4" = 1'-0"



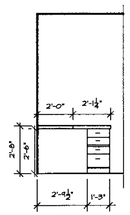
4 / A-5 KITCHENETTE RM. 123
1/4" = 1'-0"



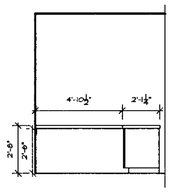
5 / A-5 STORAGE RM. 109
1/4" = 1'-0"



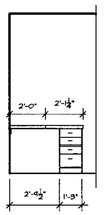
6 / A-5 ATTENDANT STATION RM. 105
1/4" = 1'-0"



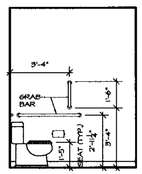
7 / A-5 ATTENDANT STATION RM. 105
1/4" = 1'-0"



8 / A-5 ATTENDANT STATION RM. 106
1/4" = 1'-0"

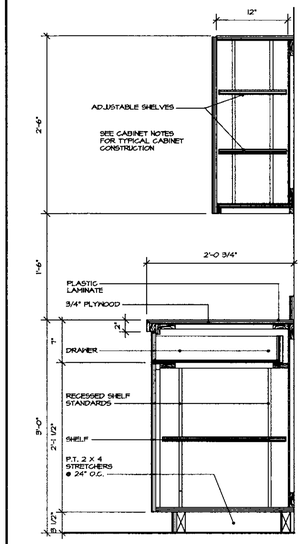


9 / A-5 ATTENDANT STATION RM. 106
1/4" = 1'-0"

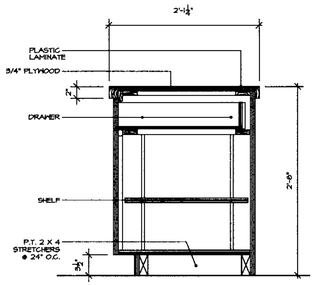


10 / A-5 TOILET RM 103
1/4" = 1'-0"

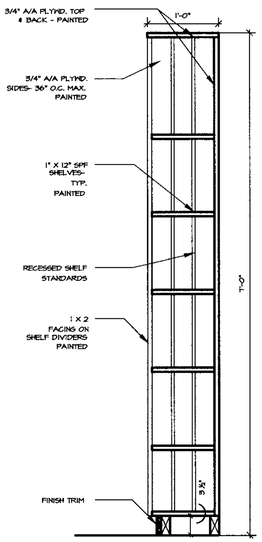
11 / A-5 TOILET RM 103
1/4" = 1'-0"



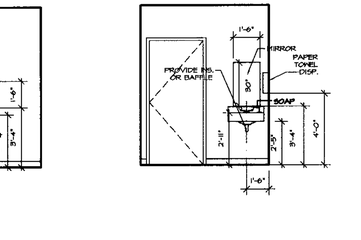
TYPICAL CABINET CONSTRUCTION DETAIL
SCALE - 1" = 1' - 0"



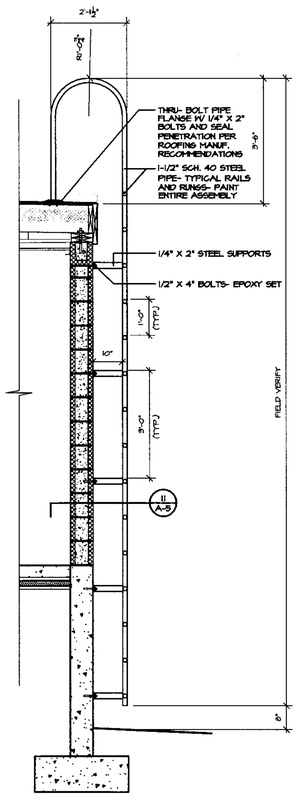
TYPICAL DESK HEIGHT CABINET CONSTRUCTION DETAIL
SCALE - 1" = 1' - 0"



SECTION THRU UTILITY SHELVING
SCALE - 1" = 1' - 0"



11 / A-5 DETAIL- ROOF ACCESS LADDER
1" = 1'-0"



10 / A-5 DETAIL- ROOF ACCESS LADDER
1/2" = 1'-0"

McGill ASSOCIATES
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55 BROAD STREET ASHEVILLE, NC 28801 PH. (828) 252-0575 FIRM LICENSE #C-0459

WILLIAM M. DECHANT REGISTERED ARCHITECT #6873 NORTH CAROLINA ASHEVILLE 10/14/10

STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN

HENDERSON COUNTY

HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
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DESIGNED BY: WMD
CADD BY: WMD
DESIGN REVIEW: _____
CONST. REVIEW: _____

SCALE HOUSE FLOOR PLAN & ELEVATIONS

SHEET
A5

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760 Merrimon Ave. Suite 103
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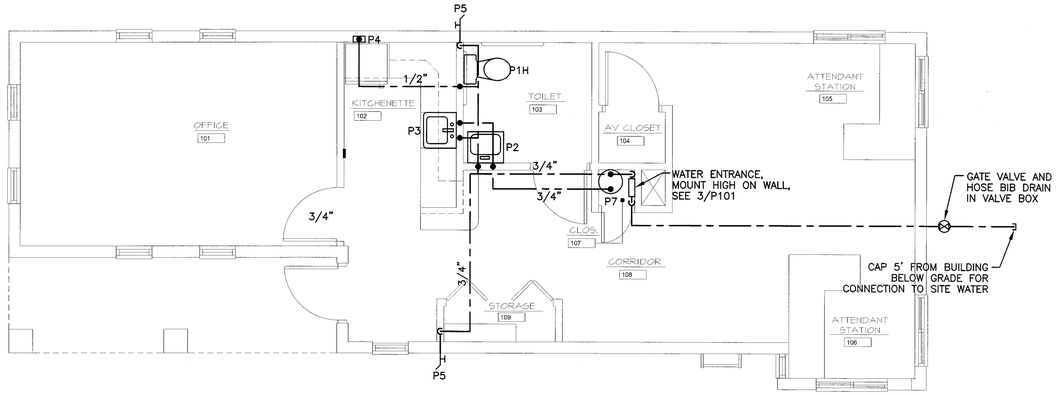
PLUMBING FIXTURE SCHEDULE

ITEM NO.	ITEM	CONNECTION SIZE WASTE	VENT	HOT	COLD	DESCRIPTION
P1H	FLUSH TANK TOILET HANDICAPPED ACCESSIBLE	4"			1/2"	ELONGATED, WHITE, VITREOUS CHINA, 1.6 GPF, ADA APPROVED, AMERICAN STANDARD 'CADET RIGHT HEIGHT' #2998.012 OPEN FRONT SEAT LESS COVER, CHURCH #9500C
P2	WALL HUNG LAVATORY	2"		1/2"	1/2"	20 1/2x18 1/4, WHITE, VITREOUS CHINA, 4" CENTERS AMERICAN STANDARD 'LUCERNE' #0355.012 GRID STRAINER & TAILPIECE, CHICAGO #327-ACP
P2F	FAUCET USE WITH P2					SINGLE HANDLE, CHROME PLATED, AERATOR, ADA APPROVED, TEMPERATURE LIMITING, T&S #B2711
P3	SINGLE BOWL SINK	2"		1/2"	1/2"	22x19x7 1/2", 18 GA. TYPE 304 S.S., SELF RIMMING, 4 FAUCET HOLES, ELKAY #LR2219 S.S. STRAINER & TAILPIECE, ELKAY #LK99
P3F	FAUCET USE WITH P3					CHROME, SWING SPOUT, AERATOR, WING HANDLES, SPRAYER, ELKAY #LKD231
P4	ICE MAKER OUTLET BOX				1/2"	1/4 TURN BALL VALVE, COPPER SWEAT, 6 FT. STAINLESS HOSE, POLYSTYRENE BOX AND FACE PLATE, OATEY #38570
P5	FREEZE PROOF HOSE BIB				3/4"	DUAL CHECK BACKFLOW PREVENTER, VACUUM BREAKER, WHEEL HANDLE, CHROME FINISH WOODFORD MODEL #27
P6	FLOOR CLEAN OUT					SIZE TO EQUAL LINE, CI COVER OUTSIDE, NONSKID COVER SERVICE AREAS, CARPET FLANGE WITH CARPET WADE 6000
P7	ELECTRIC WATER HEATER	2"		3/4"	3/4"	30 GALLON STORAGE, STATE #ES6-DORS
P8	EXPANSION TANK				1/2"	2 GALLON, GLASS LINED, BUTYL RUBBER DIAPHRAGM, 2-2500W NON-SIMULATANEOUS ELEMENTS, 240V, 1ø, STATE #ETC-2X
P9	FLOOR DRAIN	3"			1/2"	CAST IRON W/7" DIA. BRONZE STRAINER TOP, DEEP SEAL TRAP W/PRIMER WADE #W-1100

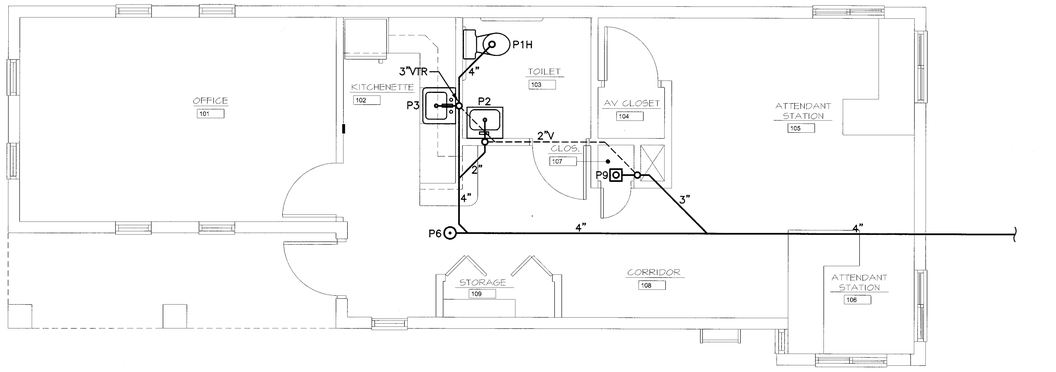
NOTE:
1. P-TRAPS SHALL BE 1 1/4X1 1/2" SEMI CAST WITH 17 GAGE WASTE TO WALL.
2. COORDINATE FAUCETS AND FIXTURE HOLES.
3. IF HANDICAP LAVATORY PIPING IS NOT ENCLOSED, PROVIDE DRAIN INSULATION KIT: TRUEFLO HANDI LAV GUARD.
4. PROVIDE OFF-SET DRAINS FOR HANDI-CAP LAVATORIES.

PLUMBING LEGEND

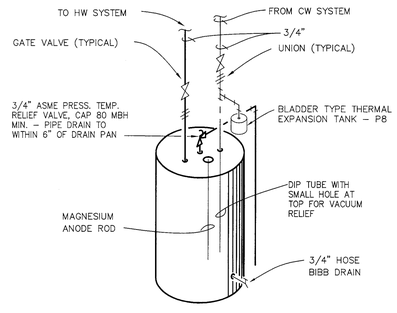
MARK	DESCRIPTION
— — — — —	COLD WATER, COPPER RIGID "L" ABOVE GRADE, INSULATE W/1" FIBERGLASS PIPE INSULATION INSIDE BUILDING ENVELOPE, ANNEALED "K" UNDER SLAB AND BELOW GRADE, MINIMAL JOINTS UNDER SLAB. IF JOINTS UNDER SLAB REQUIRED, BRAZE JOINTS.
——— — — ———	120° HOT WATER, SAME AS ABOVE
———	SOIL PIPING SCHEDULE 40 PVC
--------	VENT PIPING, SAME AS ABOVE
⋈	CUTOUT VALVE, GATE OR BALL, BRONZE, SIZE TO EQUAL PIPE, APPROVED FOR POTABLE WATER SYSTEMS
⋈	GATE OR BALL VALVE, BRONZE, SIZE TO EQUAL PIPE APPROVED FOR POTABLE WATER SYSTEMS
⋈	CHECK VALVE SAME AS ABOVE
VTR	VENT THROUGH ROOF, EXTEND 6" ABOVE ROOF, PENETRATE BEHIND ROOF PEAK OR PARAPET, PAINT TO MATCH ROOF, COORDINATE FLASHING WITH ROOF. MAINTAIN 10' CLEARANCE FROM HVAC MAKE-UP AIR INTAKES



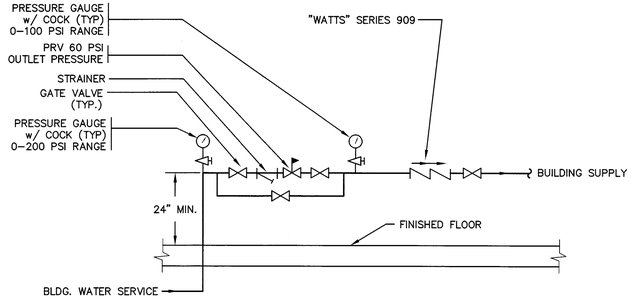
1 / P101 FLOOR PLAN – PLUMBING SUPPLY
SCALE: 1/4" = 1'-0"



2 / P101 FLOOR PLAN – PLUMBING DWV
SCALE: 1/4" = 1'-0"



4 / P101 WATER HEATER DETAIL
NOT TO SCALE



3 / P101 WATER ENTRANCE DETAIL
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 3494 RAY E. MORGAN

STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
DATE: 10/14/10
SCALE: AS NOTED
DESIGNED BY: REM
CADD BY: EAO
DESIGN REVIEW: ———
CONST. REVIEW: ———

SCALE HOUSE
FLOOR PLAN
PLUMBING

SHEET
P101

SECTION 15010P
BASIC PLUMBING REQUIREMENTS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

A. Basic Plumbing Requirements specifically applicable to Division 15 Sections, in addition to Division 1 – General Requirements.

1.2 SCOPE OF WORK

A. Provide controls, valves, piping, plumbing fixtures, taps, and other required materials to produce complete and operating plumbing system as shown on drawing.
B. Obtain all permits, pay all fees and request inspection from authority having jurisdiction.
C. All work and materials shall be guaranteed for one year from date of substantial completion.
D. Provide for water service during construction. The Owner will be responsible for bill.

1.3 WORK SEQUENCE

A. Coordinate construction and utility outages (if any) with Owner, Engineer, all other trades and utility companies.
B. Visit site before submitting bid to confirm existing conditions. Notify Engineer of discrepancies in the Contract Documents and existing conditions.
C. Please E-Mail questions and or comments to gus@simsengineers.com or fax (828-251-2026) in lieu of telephone calls.

1.4 SUBMITTALS

A. Submit under provisions of Contract Documents.
B. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittal. Identify items with marks to match those shown on drawings.
C. Mark dimensions and values in units to match those specified.
D. Architect will approve all colors.
E. All submittals shall have the General Contractor's stamp, with approval signature.
F. Highlight deviations from specified materials.
G. Shop Drawings: 6 sets, including 3 for maintenance manuals.
H. Product Data: 6 sets, including 3 sets for maintenance manuals. Data shall include the following, but not limited to:
   1. Pressure Reducing Valves
   2. Insulation
   3. Plumbing Fixtures
   4. Floor Drains, Cleanouts, Accessories
   5. Valves
I. Certifications: 3 copies
J. Test Reports: 3 copies
K. Warranties (Guarantees): 6 copies, including 3 for maintenance manuals.
L. Maintenance Manuals: 3 complete sets with individual sets of this data bound in 10 1/2 x 11 1/2 loose-leaf 3-ring binders, 1/2", 2", or 3" ring size, with rigid permanent vinyl covered back and front. Separators with index tabs and loose-leaf sheet protectors shall be provided. One set shall have all sheets individually encased in clear, plastic document protectors.

1.5 REGULATORY REQUIREMENTS

A. Conform to applicable North Carolina State and Local Building Codes.
B. Fire Protection: Conform to NFPA.
C. Electrical: National Electric Code.
D. Life Safety Code, NFPA 101
E. All codes shall be the most recent edition.
F. The Contractor shall install all materials per the State and Local Building Code. Any work that does not comply shall be made to comply at the Contractor's expense.
G. All equipment shall be UL approved for purpose specified.
H. Install all materials per manufacturer's instructions.

1.6 PROJECT/SITE CONDITIONS

A. Install Work in locations shown on Drawings, unless prevented by Project conditions.
B. Prepare record drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before proceeding. Submit all changes on Record Documents as a requirement of project close out.
C. Refer to Architectural drawings for dimensions, locations, cabinets, etc. Do not scale Plumbing Drawings.
D. Conceal all piping except where the Architect/Engineer grants specific permission.
E. Arrange mechanical work in a neat, well organized manner with piping and similar services running parallel with primary lines of the building construction.
F. Locate operating and control equipment properly to provide easy access, and arrange entire mechanical work with adequate access for operation and maintenance.
G. Give right-of-way to piping which must slope for drainage.
H. Advise other trades of openings required in their work for the subsequent move-in of large units of mechanical work (equipment).
I. Coordination Drawings: For locations where several elements of mechanical (or combined mechanical and electrical) work must be sequenced and positioned with precision in order to fit into the available space, prepare coordination drawings (shop drawings) showing the actual dimensions (at accurate scale) required for the installation. Prepare and submit coordination drawings prior to purchase-fabrication-installation of any of the elements involved in the coordination.

1.7 SUBSTITUTIONS

All products listed are to establish design and quality standards, not to limit submittals. Substitutions may be accepted if approved as equivalent. Contact Engineer prior to bid with any questions. All substitutions must be submitted within 10 days after bid or supply as specified. Highlight substitution deviations from materials specified. Cost incurred to the project to install substituted materials shall be the responsibility of the Contractor requesting the substitution.

1.8 NOT USED

1.9 Plumbing Equipment: Show the following information for all plumbing equipment:
Nameplate designation
Manufacturer's nameplate data
Location of equipment
Area served
Complete parts drawing and list
Manufacturer's operating instructions
Manufacturer's maintenance instructions
Manufacturer's repair manuals

Manufacturer's installation instructions
Nearest supplier for parts and replacements with telephone number
Nearest service organization for equipment with telephone number

1.10 NOT USED

1.11 Maintenance Instruction: A typewritten form of instructions for maintenance of the systems in itemized form and with time schedule for maintenance work, shall be furnished. The instructions shall list each item of mechanical equipment requiring inspection, lubrication or service and describe the performance of such maintenance. The list shall include the type of bearings for each piece of equipment, the type of and frequency of lubrication required. The operating personnel shall be instructed in the care of the system in accordance with the typewritten instructions.

2. PART 2 DESCRIPTION OF WORK

2.1 GENERAL DESCRIPTION OF WORK

A. Coordinate work with other trades.
B. Plumbing Contractor shall provide all water, soil and vent piping.
C. Fire stop all penetrations through rated assemblies. See Architectural sheets for locations of rated assemblies.
D. Provide all new valves, fixtures, pipes, pumps, insulation, etc. and other required material.
E. All major pieces of material shall be produced by the same manufacturer.
F. Plumbing Contractor shall provide all penetrations, etc. and patching required to install plumbing work.
G. Provide stops for each fixture. Exposed stops and supplies shall be chrome plated.
H. Coordinate all required starters, disconnects, switches with Electrical Contractor for installation. Coordinate electrical requirements for equipment supplied with Electrical Contractor prior to ordering equipment.
I. Provide warning tape in trench with buried pipe. Locate tape 6" below finish grade directly above pipe.
J. Provide fuel gas piping to equipment as required with gas approved shut offs at each equipment item.

2.2 PIPING:

A. Cold water service line to 5' from building: "K" copper, annealed. Tubing shall be approved for potable service. 36" below grade. Provide warning tape 6" below grade above tubing.
B. Cold water and hot water. From 5' from building and distribution: Copper, annealed "K" below grade and under slab. Minimal joints under slab. Rigid "L" above grade. Insulate piping above grade with 1" pre-formed fiberglass pipe insulation. Provide pre-formed PVC fitting covers. Solder shall be lead free. Braze joints below grade and under slab.
C. Soil Piping: Schedule 40 PVC except bell and spigot, cast iron under vehicular traffic areas and burial depths less than 24".
D. Vent Piping: Schedule 40 PVC. Coordinate vent termination locations with Owner prior to starting work. Paint to match building.
E. Support piping with threaded rods and hangers, channel trapeze, channel and clamps, or some other approved method from the building structure.

2.3 FIXTURES

A. See fixture schedule on drawing.

2.4 WIRING

All control wiring (120V and less) to be complete to all motorized equipment, and control devices listed in this specification and shown on the mechanical drawings, shall be done under Division 15. The Contractor shall refer to Electrical plans and specifications to determine the source of electrical energy for the various control circuits. All wiring shall be in conduit, shall conform with Division 16 of these specifications, all local codes, the National Electrical Code, and shall be installed by an approved licensed electrician. Wiring diagrams indicating wire sizes and conduit runs for all electrical work that is required to be installed under this contract shall be submitted to the Engineer for prior approval before work is begun. Upon completion of the work, the wiring diagrams shall be revised to incorporate any additions or corrections and two copies of the "as installed" diagrams shall be furnished to the Owner and one to the Engineer on reproducible sepia paper.

Wiring shown on electrical plans is for plumbing equipment scheduled. Any equipment provided by the Contractor that differs from that scheduled in electrical characteristics that requires additional voltage, electrical design and/or electrical cost changes shall be the responsibility of this Contractor. Any cost incurred for additional electrical design and/or electrical changes due to any equipment other than equipment scheduled, shall be the responsibility of this Contractor.

In general interlock wiring between pieces of plumbing equipment shall be done under Division 15P (Example: Power exhaust fan interlock with water heater).

2.5 FOUNDATIONS: All concrete foundations anchor forms, or pads indicated on the drawings that may be necessary and required for the installation of equipment specified under this contract, shall be furnished and installed. Provide anchor bolts for the equipment foundations/pads. Equipment to receive pads are pumps, boiler and air cooled chiller.

2.6 MISCELLANEOUS STEEL SUPPORTS: All supporting steel grillage, steel angles, channels, pipe or structural steel stands, and anchoring devices that may be required to adequately and rigidly support either piping, insulation, or equipment installed under this contract, shall be provided and installed.

2.7 CHASES AND OPENINGS: Lay out all chases and openings, required for the execution of this work well in advance of the structural work. Provide thimbles in walls and partitions. Thimbles shall be standard weight galvanized steel pipe.

2.8 NOT USED

2.9 NOT USED

2.10 EQUIPMENT

A. Signs: Provide engraved plastic-laminate signs at locations of major equipment units and primary control devices. Provide text of sufficient clarity and lettering of sufficient size to convey adequate information at each location, and mount permanently in an appropriate and effective location. Comply with recognized industry standards for color and design.
B. Selection: Refer to instances where either a plastic-laminate sign or plasticized tag might be appropriate to the Engineer for resolution.

2.11 ACCESSIBILITY:

A. No valves, controls, unions, etc., shall be placed in any pipe line at a location that will be inaccessible after the system is completed.
B. Any controls, valves and piping controls, expansion joints, or other apparatus which must be located in an inaccessible location shall be provided with suitable access doors (fitted in a framed hole) which will permit proper operation and servicing of the apparatus. Access doors aforementioned includes access doors in walls, ceilings, and, where required, a combination of above. Access doors to be piano hinged.
C. Floor drains and floor sinks shall not be installed under equipment. They must be visible and easily accessible. Place them straddling the front edge of equipment. They are a tripping hazard if they are placed too far into the room. Do not install dumpster pad drain under dumpster.

2.12 EXCAVATING FOR PLUMBING WORK

A. General: The work of this article is defined to include whatever excavating and backfilling (but excluding insulating backfill) is necessary to install the plumbing work. Coordinate the work with other excavating and backfilling in the same area, including dewatering, floor protection provisions, and other temporary facilities. Coordinate the work with other work in the same area, including other underground services, landscape development, paving, and floor slabs on grade. Coordinate with weather conditions and provide temporary facilities needed for protection and proper performance of excavating and backfilling.
B. General Standards: Except as otherwise indicated, comply with the applicable provisions of the Division 2 sections, for plumbing work excavating and backfilling. Refer instances of uncertain applicability to the Engineer for resolution before proceeding.
C. Rock Excavation shall be defined as the removal of a formation that cannot be excavated without systematic drilling and blasting or without the use of pneumatic tools. All rock excavation/removal shall be performed by the General Contractor. The Plumbing, Mechanical, and Electrical subcontractors shall lay out their work and perform all normal or earth excavation. Should these subcontractors encounter rock (bulk or trench), it shall be removed by the General Contractor using allowable funds. The General Contractor shall be responsible for providing fill material for backfill of rock excavations. Rock may be used for structural fill provided it is broken down by the excavation and compaction equipment into particles with a maximum dimension of 6". Otherwise, it must be removed from the site and legally disposed of. Placement of rock in the fill or removal from the site shall be done by the General Contractor at no additional cost to the Owner.
D. Piping Support: Support pipe 4" and smaller directly on undisturbed soil. Support pipe 6" and larger, on compacted and shaped sub-base material of depth shown but not less than 6" deep. Compact previously disturbed and unsatisfactory subsoil to provide adequate, uniform support for plumbing work; or excavate and replace with stable sub-base material or lean concrete.
E. Water Bearing Pipe: Except as otherwise specifically indicated, place exterior underground water bearing pipe (including drainage lines) a minimum of 36" below grade (measured to top of pipe).
F. Sequencing: Delay backfill and encasement of piping until testing of piping system has been completed.

2.13 FINISHING PLUMBING WORK

A. Touch up paint that is chipped or scratched from mechanical equipment supplied and apply 2 coats of black rust preventative on all exposed support metal and hangers mounted outdoors and in mechanical rooms.
B. Cleaning, Testing, Adjustments and Inspections shall be accomplished in accordance with the following instructions and requirements. Provide temporary fill and drainage lines, wherever required, and connect them to the piping systems for these procedures and, finally, upon completion disconnect and remove these temporary lines.
C. Cleaning and Oiling: All piping systems shall be thoroughly cleaned of grease, iron cuttings, welding slag, loose scale and other refuse. Should any pipe, valves, traps, strainers, and other specialties, and equipment be stopped up by refuse, disconnect, clean and reconnect such pipe, equipment and material. All strainer baskets shall be removed, cleaned and replaced.

Exterior surfaces of piping, materials, or equipment that is to be painted or insulated shall be cleaned to remove lint, grease and oil.

2.14 TESTS

Provide written test results to the Engineer. Provide one week notice prior to all tests.

A. Soil Lines and Waste & Vent Stacks. After the lines and various connections are in place, all openings, including vents, shall be carefully closed and the whole system filled with water to ten feet of head and test for 6 hours. Any pipe, fitting or joint showing defect shall be immediately removed and replaced and the test reapplied.
B. Domestic Water Lines. After lines are in place and before concealing, all water lines shall be subjected to a hydrostatic pressure of 150 lbs. for a period of at least 6 hours.
C. Fuel gas piping. After lines are in place and before concealing, all fuel gas lines shall be subjected to a pressure of 15 lbs. for a period of at least 6 hours or as required by Code or fuel gas utility.
D. Adjustments shall be coordinated with cleaning and testing to assure equipment performance as specified.

Water and electricity will be furnished by the Owner for the final operating tests.

All unfired pressure vessels furnished under this division shall be constructed, inspected and stamped in accordance with applicable sections of the ASME Codes. Data shall include inspector's National Board registration number.

3. PART 3 PLUMBING WORK CLOSEOUT

3.1 General: Refer to the Division 1 sections for general closeout requirements. Maintain a daily log of operational data on plumbing equipment and systems through the closeout period; record hours of operation, assigned personnel, fuel consumption and similar information; submit copy to Owner.

3.2 Record Drawings: For plumbing work, give special attention to the complete and accurate recording of underground piping, other concealed and non-accessible work, branching arrangement and valve locations (including valve numbers that match those numbers shown on the valve schedule) for piping systems, locations of control system sensors and other control devices, and work of change orders where not shown accurately by contract documents. Submit to Engineer at end of project one set of reproducible sepias that show all recorded changes in the mechanical work.

3.3 Operating Instructions: Conduct a walk-through instruction seminar for the Owner's personnel to be involved in the continued operation and maintenance of plumbing equipment and systems. Explain the identification system, operation diagrams, emergency and alarm provisions, sequencing requirements, seasonal provisions, security, safety, efficiency, and similar features of the systems.

3.4 Training: Contractor to provide training on all major equipment, controls, etc., as part of the contract.

3.5 Turn-Over of Operations: At the time of substantial completion, turn over the prime responsibility for operation of the plumbing equipment and systems to the Owner's operating personnel. However, until the time of final acceptance, provide one full-time employee, who is completely familiar with the work, to consult with and continue training with the Owner's personnel.

END OF SECTION

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 3494 E. 7.29.10

STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
DATE: 7/29/10
SCALE: AS NOTED
DESIGNED BY: WMD
CADD BY: WMD
DESIGN REVIEW: _____
CONST. REVIEW: _____

BASIC PLUMBING REQUIRMENTS

SHEET
P301

SUPPLY DIFFUSER SCHEDULE		
MARK	THROAT	DESCRIPTION
1	6x6	LOUVER FACE, STEEL, 4-WAY, OPPOSED BLADE DAMPER, BAKED OFF-WHITE FINISH, METALAIRE 5500-65 SERIES
2	9x9	

SIDEWALL SUPPLY REGISTERS SHALL BE CONSTRUCTED OF STEEL, DOUBLE DEFLECTION, OPPOSED BLADE DAMPER, HORIZONTAL FRONT BLADES, METALAIRE H4004S

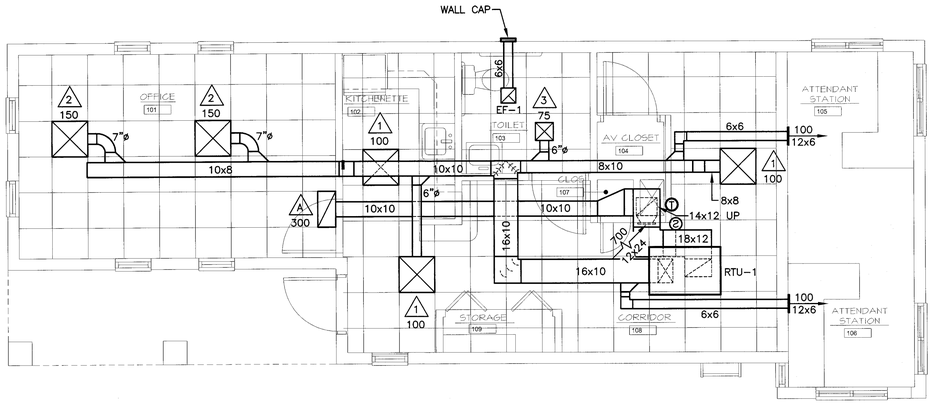
RETURN REGISTER SCHEDULE		
MARK	THROAT	DESCRIPTION
SIDEWALL	12x24	STEEL SINGLE DEFLECTION WITH BLADES AT 22°, METALAIRE # H4002R

EXHAUST FAN SCHEDULE							
MARK	TYPE	CFM	ESP	RPM	HP	VOLTS	DESCRIPTION
EF-1	CEILING PREMIUM	88	0.25	950	-	120	GREENHECK # SP-A110

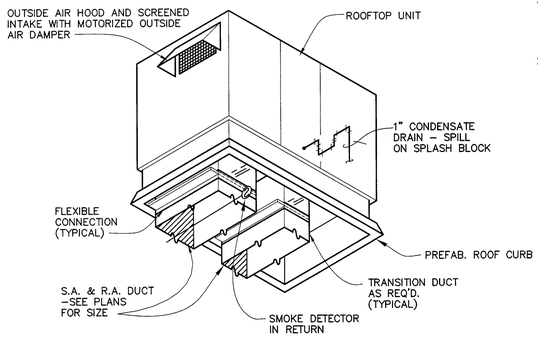
1. DAMPER FANS TO REQUIRED CFM.
2. PROVIDE MOUNTING SUPPORTS.

HVAC LEGEND	
MARK	DESCRIPTION
2 / 350	DIFFUSER, (2) DENOTES TYPE (SEE SCHEDULE) "350" DENOTES CFM, MAY USE FIVE FEET OF FLEX DUCT TO CONNECT TO TRUNK
A / 350	RETURN REGISTER, (A) DENOTES TYPE (SEE SCHEDULE), "350" DENOTES CFM
T 1	THERMOSTAT, PROGRAMABLE FOR 5-1-1 DAY WEEKS, NIGHT SET BACK, AUTO HEAT TO COOL, "1" DENOTES UNIT CONTROLLED, PROVIDE THERMOSTAT FOR EACH HVAC SYSTEM, COORDINATE LOCATION WITH ARCHITECT.
12x6	RECTANGULAR DUCTWORK, GALVANIZED; "12" DENOTES WIDTH, "6" DENOTES DEPTH. DIMENSIONS SHOWN ARE FREE AND CLEAR.
12"ø	DUCTWORK, ROUND, SPIRAL WOUND, UNILOCK JOINTS, PAINT GRIP FINISH. MANUFACTURER'S FITINGS.
	DUCT TEE, BEND, ELBOW, RADIUS NOT LESS 1.5 C/L WIDTH OR PROVIDE RECTANGULAR ELBOWS WITH AIR FOIL TURNING VANES.
	SPLITTER DAMPER
EF-1	EXHAUST FAN, "1" DENOTES NUMBER (SEE SCHEDULE), COORDINATE CURB INSTALLATION WITH ROOF INSTALLATION
	SIDE TAKE OFF WITH VOLUME CONTROL DAMPER TYPICAL ALL TAKE OFFS.
(2) SD	DUCT SMOKE DETECTOR, FURNISHED AND INSTALLED BY MC. SAMPLE TUBE ACROSS WIDEST PORTION OF DUCT. SHUT DOWN UNIT IN ALARM. SIMPLEX 4098-9687 INTERCONNECT WITH REMOTE AUDIO VISUAL ALARM/RESET, SIMPLEX 4098-9842
C	CONDENSATE PIPING, SCHEDULE 40 PVC

NOTE:
1. LINE ALL RECTANGULAR DUCT WITH 1" THICK, 1 1/2"# DENSITY FIBERGLASS WITH BACK FIRE RESISTANT COMPOSITE AIRSTREAM SURFACE. APPLY BY UNIFORMLY SPRAYING AN ADHESIVE ACROSS THE MEAL SURFACE AND ADDITIONALLY INSTALLING WELDED PINS AND WASHERS, IN ACCORDANCE WITH SMACNA STANDARDS.
2. ALL ROUND SUPPLY AND RETURN DUCT WITHIN THE BUILDING THERMAL ENVELOPE SHALL BE WRAPPED WITH 2" THICK, 3/4# DENSITY FIBERGLASS WITH FOIL FACED VAPOR BARRIER. SEAL ALL JOINTS WITH EITHER LAP SEAL OR FOIL FACED TAPE.



1 / M101 FLOOR PLAN - HVAC
SCALE: 1/4" = 1'-0"



3 / M101 ROOFTOP UNIT DETAIL
NOT TO SCALE

CENTRAL HEATING AND AIR CONDITIONING EQUIPMENT SCHEDULE - HEAT PUMP																					
UNIT NO.	COOLING CAPACITY			HEATING CAPACITY		AUX. HEAT			COMPRESSOR MOTOR			O D FAN MOTOR			BLOWER						DESCRIPTION
	TOTAL (BTUH)	SENSIBLE (BTUH)	EER (W/TXV)	TOTAL (BTUH) (AT 17°)	COP	TOTAL (KW)	STEPS	VOLTS /ø	QTY	FLA (EA)	VOLTS /ø	QTY	FLA	VOLTS /ø	QTY FANS MOTORS	CFM TOTAL	O D AIR CFM	ESP	FLA	VOLTS /ø	
RTU-1	28,330	20,460	14	17,600	2.2	10.0	1	240/1	1	14.3	240/1	1	0.9	240/1	1	875	80	0.05	4.1	240/1	CARRIER # 50VT030

NOTE:
1. UNIT SHALL HAVE FACTORY SUPPLIED NON FUSED DISCONNECT SWITCH.
2. UNIT SHALL HAVE FACTORY SUPPLIED BUILT IN GFCI RECEPTACLE.

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NORTH CAROLINA SEAL 3494 ENGINEER RAY E. MORGAN
10.14.10

STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
DATE: 10/14/10
SCALE: AS NOTED
DESIGNED BY: REM
CADD BY: EAO
DESIGN REVIEW: ------
CONST. REVIEW: ------

SCALE HOUSE
FLOOR PLAN
HVAC

SHEET
M101

SECTION 15010H
BASIC HVAC REQUIREMENTS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

A. Basic HVAC Requirements specifically applicable to Division 15 Sections, in addition to Division 1 – General Requirements.

1.2 SCOPE OF WORK

A. Provide central HVAC equipment including, but not limited to, packaged heat pump, controls, thermostats, ventilators, piping, ducting, air distribution equipment, etc., and other required materials to produce complete and operating HVAC system as shown on drawing.
B. Obtain all permits, pay all fees and request inspection from authority having jurisdiction.
C. All work and materials shall be guaranteed for one year from date of substantial completion.

1.3 WORK SEQUENCE

A. Coordinate construction and utility outages (if any) with Owner, Engineer, all other trades and utility companies.
B. Visit site before submitting bid to confirm existing conditions. Notify Engineer in writing of discrepancies in Contract Documents and existing conditions.
C. E–Mail questions and or comments to gus@simsengineers.com or fax (828–251–2026) in lieu of telephone calls.

1.4 SUBMITTALS

A. Submit under provisions of Contract Documents.
B. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittal. Identify items with marks to match those shown on drawings.
C. Mark dimensions and values in units to match those specified.
D. Architect shall approve all colors.
E. All submittals shall have the General Contractor's stamp, with approval signature.
F. Highlight deviations from specified materials.
G. Shop Drawings: 6 sets, including 3 for maintenance manuals.
H. Product Data: 6 sets, including 3 sets for maintenance manuals. Data shall include the following, but not limited to:
   1. Heat Pump
   2. Insulation
   3. Air Distribution Equipment
   4. Exhaust Fans
   5. Controls
I. Certifications: 3 copies
J. Test Reports: 3 copies
K. Warranties (Guarantees): 6 copies, including 3 for maintenance manuals.
L. Maintenance Manuals: 3 complete sets with individual sets each of this data bound in 10 1/2 x 11 1/2 loose–leaf 3–ring binders, 1 1/2", 2", or 3" ring size, with rigid permanent vinyl covered back and front. Separators with index tabs and loose–leaf sheet protectors shall be provided. One set shall have all sheets individually encased in clear, plastic document protectors.

1.5 REGULATORY REQUIREMENTS

A. Conform to applicable North Carolina State and Local Building Codes.
B. Fire Protection: Conform to NFPA.
C. Electrical: National Electric Code.
D. Life Safety Code, NFPA 101.
E. All codes shall be the most recent edition.
F. The Contractor shall install all materials per the State and Local Building Code. Any work that does not comply shall be made to comply at the Contractor's expense.
G. All equipment shall be UL approved for purpose specified.
H. Install all materials per manufacturer's instructions.

1.6 PROJECT/SITE CONDITIONS

A. Install Work in locations shown on Drawings, unless prevented by Project conditions.
B. Prepare record drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before proceeding. Submit all changes on Record Documents as a requirement of project close out.
C. Refer to Architectural drawings for dimensions, locations, cabinets, etc. Do not scale HVAC Drawings.
D. Conceal all duct, piping, etc. except where the Architect/Engineer grants specific permission.
E. Arrange HVAC work in a neat, well organized manner with piping and similar services running parallel with primary lines of the building construction.
F. Locate operating and control equipment properly to provide easy access, and arrange entire mechanical work with adequate access for operation and maintenance.
G. Give right–of–way to piping which must slope for drainage.
H. Advise other trades of openings required in their work for the subsequent move–in of large units of mechanical work (equipment).
I. Coordination Drawings: For locations where several elements of mechanical (or combined mechanical and electrical) work must be sequenced and positioned with precision in order to fit into the available space, prepare coordination drawings (shop drawings) showing the actual dimensions (at accurate scale) required for the installation. Prepare and submit coordination drawings prior to purchase–fabrication–installation of any of the elements involved in the coordination.

1.7 SUBSTITUTIONS

All products listed are to establish design and quality standards, not to limit submittals. Substitutions may be accepted if approved as equivalent. Contact Engineer prior to bid with any questions. All substitutions must be submitted within 10 days after bid or supply as specified. Highlight substitution deviations from materials specified. Cost incurred to modify project to install substituted materials shall be the responsibility of the Contractor requesting the substitution.

1.8 NOT USED

1.9 Mechanical Equipment: Show the following information for all mechanical equipment:
Nameplate designation
Manufacturer's nameplate data
Location of equipment
Area served
Complete parts drawing and list
Manufacturer's operating instructions
Manufacturer's maintenance instructions
Manufacturer's repair manuals
Manufacturer's installation instructions
Nearest supplier for parts and replacements with telephone number
Nearest service organization for equipment with telephone number

1.10 Control Data:
Control diagrams and wiring diagrams where applicable. Description of control systems.
Catalog data, maintenance and calibration instruction for all components.
Control supplier and address
Control installer and address

1.11 Maintenance Instruction: A typewritten form of instructions for maintenance of the systems in itemized form and with time schedule for maintenance work, shall be furnished. The instructions shall list each item of mechanical equipment requiring inspection, lubrication or service and describe the performance of such maintenance. The list shall include the type of bearings for each piece of equipment, the type of and frequency of lubrication required. The operating personnel shall be instructed in the care of the system in accordance with the typewritten instructions.

2. PART 2 DESCRIPTION OF WORK

2.1 GENERAL DESCRIPTION OF WORK

A. Coordinate work with other trades.
B. Fire stop all penetrations through rated assemblies. See Architectural sheets for locations of rated assemblies.
C. All major pieces of material shall be produced by the same manufacturer. Provide Lamicore labels.
D. HVAC Contractor shall provide all penetrations, etc. and patching required to install HVAC work.
E. Coordinate all required line voltage starters, disconnects, switches with Electrical Contractor for installation. Coordinate electrical requirements for equipment supplied with Electrical Contractor prior to ordering equipment.
F. Provide low voltage controls and control transformers.

2.2 DUCTWORK:

Steel duct shall be galvanized steel with 1" internal insulation. Fabricated in accordance with SMACNA low pressure duct standards. Insulation shall be coated with EPA approved anti–microbial agent. Secure insulation with adhesive and mechanical fasteners. Seal ends of insulation. Seal all joints with a rubberized joint sealer.

Support duct independently from building structure.

2.3 CONDENSATE PIPING:

Schedule 40 PVC

2.4 NOT USED

2.5 WIRING

All control wiring (120V and less) to be complete to all motorized equipment, and control devices listed in this specification and shown on the mechanical drawings, shall be done under Division 15. The Contractor shall refer to Electrical plans and specifications to determine the source of electrical energy for the various control circuits. All wiring shall be in conduit, shall conform with Division 16 of these specifications, all local codes, the National Electrical Code, and shall be installed by an approved licensed electrician. Wiring diagrams indicating wire sizes and conduit runs for all electrical work that is required to be installed under this contract shall be submitted to the Engineer for prior approval before work is begun. Upon completion of the work, the wiring diagrams shall be revised to incorporate any additions or corrections and two copies of the "as installed" diagrams shall be furnished to the Owner and one to the Engineer on reproducible sepia paper.

Wiring shown on electrical plans is for mechanical equipment scheduled. Any equipment provided by the Contractor that differs from that scheduled in electrical characteristics that requires additional voltage, electrical design and/or electrical cost changes shall be the responsibility of this Contractor. Any cost incurred for additional electrical design and/or electrical changes due to any equipment other than equipment scheduled, shall be the responsibility of this Contractor.

In general interlock wiring between pieces of mechanical equipment shall be done under Division 15M (Example: Exhaust fan interlock with air handling unit).

2.6 NOT USED

2.7 MISCELLANEOUS STEEL SUPPORTS: All supporting steel grillage, steel angles, channels, pipe or structural steel stands, and anchoring devices that may be required to adequately and rigidly support either piping, insulation, or equipment installed under this contract, shall be provided and installed.

2.8 CHASES AND OPENINGS: Lay out all chases and openings, required for the execution of this work well in advance of the structural work. Provide thimbles in walls and partitions. Thimbles shall be standard weight galvanized steel pipe.

2.9 NOT USED
2.10 NOT USED
2.11 EQUIPMENT

A. Signs: Provide engraved plastic–laminate signs at locations of major equipment units and primary control devices. Provide text of sufficient clarity and lettering of sufficient size to convey adequate information at each location, and mount permanently in an appropriate and effective location. Comply with recognized industry standards for color and design.
B. Selection: Refer to instances where either a plastic–laminate sign or plasticized tag might be appropriate to the Engineer for resolution.

2.12 ACCESSIBILITY:

A. No valves, controls, unions, etc., shall be placed in any pipe line at a location that will be inaccessible after the system is completed.

B. Any dampers, controls, valves and piping controls, expansion joints, or other apparatus which must be located in an inaccessible location shall be provided with suitable access doors (fitted in a framed hole) which will permit proper operation and servicing of the apparatus. Access doors aforementioned includes access doors in walls, ceilings, ductwork, and, where required, a combination of above. Access doors to be piano hinged.

2.13 EXCAVATING FOR MECHANICAL WORK

A. General: The work of this article is defined to include whatever excavating and backfilling (but excluding insulating backfill) is necessary to install the mechanical work. Coordinate the work with other excavating and backfilling in the same area, including dewatering, floor protection provisions, and other temporary facilities. Coordinate the work with other work in the same area, including other underground services, landscape development, paving, and floor slabs on grade. Coordinate with weather conditions and provide temporary facilities needed for protection and proper performance of excavating and backfilling.
B. General Standards: Except as otherwise indicated, comply with the applicable provisions of the Division 2 sections, for mechanical work excavating and backfilling. Refer instances of uncertain applicability to the Engineer for resolution before proceeding.
C. Rock Excavation shall be defined as the removal of a formation that cannot be excavated without systematic drilling and blasting or without the use of pneumatic tools. All rock excavation/removal shall be performed by the General Contractor. The Plumbing, Mechanical, and Electrical subcontractors shall lay out their work and perform all normal or earth excavation. Should these subcontractors encounter rock (bulk or trench), it shall be removed by the General Contractor using allowable funds. The General Contractor shall be responsible for providing fill material for backfill of rock excavations. Rock may be used for structural fill provided it is broken down by the excavation and compaction equipment into particles with a maximum dimension of 6". Otherwise, it must be removed from the site and legally disposed of. Placement of rock in the fill or removal from the site shall be done by the General Contractor at no additional cost to the Owner.
D. Piping Support: Support pipe 4" and smaller directly on undisturbed soil. Support pipe 6" and larger, on compacted and shaped sub–base material of depth shown but not less than 6" deep. Compact previously disturbed and unsatisfactory subsoil to provide adequate, uniform support for mechanical work; or excavate and replace with stable sub–base material or lean concrete.
E. Sequencing: Delay backfill and encasement of piping until testing of piping system has been completed.

2.14 FINISHING HVAC WORK

A. Cleaning: Exterior surfaces of piping, materials, or equipment that is to be painted or insulated shall be cleaned to remove lint, grease and oil.

Ductwork, coils, fans and casing shall be cleaned on the inside before fans and filters are operated. After the equipment has been used for any purpose such as adjusting, testing, or temporary ventilation, filters shall be cleaned or replaced, as necessary, and supply, exhaust and return ducts shall be cleaned. All coils are to be combed to remove lint.

All components of the mechanical systems shall be cleaned on outside of dust, trash, paint and masonry dropping, and left in first class condition. Belt drives shall be adjusted for proper tension and sheaves aligned. All motor and equipment bearings shall be lubricated as recommended by the individual manufacturer and oil reservoir shall be left full.

2.15 TESTS

A. Provide written test results to the Engineer. Provide one week notice prior to all tests.
B. Adjustments shall be coordinated with cleaning and testing to assure equipment performance as specified.

The entire temperature control system shall be adjusted and placed in operation by the manufacturer. Readjustments necessary to accomplish the specified results during the first year of operation shall be made without cost to the Owner.

Air duct systems shall be adjusted and balanced so that air quantities are regulated to deliver or remove the required cfm at each supply, return and exhaust terminal as specified or shown on the drawings. Distribution from air terminals shall be free from drafts, and uniform over the face of each air terminal.

Adjustments shall be made so that splitters and volume adjusters close to air terminals will have the least pressure drop consistent with volume requirements. Additional pressure drop required for balancing of shorter runs shall be obtained by adjustment of the dampers at branch duct take–offs. Adjusting fan drives shall be used for making final adjustments of total air quantities. Provide all labor and/or replacement and furnishing of extra sheaves of different sizes to accomplish the scheduled specified quantities.

Direct reading velocity meters may be used for comparative adjustment of individual air terminals, but air quantities in trunk ducts shall be measured by means of pitot tube traverses. Factory fabricated plugged or capped openings for pitot tubes shall be provided as required.

Settings of dampers, splitters, and other volume adjusting devices shall be permanently marked so that they can be restored if disturbed at any time.

Record all fan static pressures, equipment rpm's and ammeter readings at each motor.
C. General: Capacities of air handling unit, fans, and other related equipment shall be determined by operating tests of not less than eight hours duration, after stable conditions have been established.

Tabulate the final readings and analysis, and deliver four typewritten copies of the completed reports to the Engineers. The Contractor shall advise the Engineers in writing not less than 10 days in advance of when final testing and balancing will begin.

All labor and technical personnel, instruments and appliances for balancing and tests shall be furnished. If gauges, thermometers, etc., which are to be left permanently installed are used for tests, they shall not be installed until just prior to the tests to avoid possible changes in calibration.

Water and electricity will be furnished by the Owner for the final operating tests.

All unfired pressure vessels furnished under this division shall be constructed, inspected and stamped in accordance with applicable sections of the ASME Codes. Data shall include inspector's National Board registration number.

3. PART 3 HVAC WORK CLOSEOUT

3.1 General: Refer to the Division 1 sections for general closeout requirements. Maintain a daily log of operational data on mechanical equipment and systems through the closeout period; record hours of operation, assigned personnel, fuel consumption and similar information; submit copy to Owner.

3.2 Record Drawings: For HVAC work, give special attention to the complete and accurate recording of underground piping, ductwork, other concealed and non–accessible work, branching arrangement and valve location for piping systems, locations of dampers and coils in duct systems, locations of control system sensors and other control devices, and work of change orders where not shown accurately by contract documents. Submit to Engineer at end of project one set of reproducible sepias that show all recorded changes in the mechanical work.

3.3 Closeout Equipment/Systems Operations: Sequence operations properly so that work of project will not be damaged or endangered. Coordinate with seasonal requirements. Operation each item of equipment and each system in a test run of appropriate duration (with the Engineer present, and with the Owner's operating personnel present), to demonstrate sustained,satisfactory performance. Adjust and correct operations as required for proper performance. Clean and lubricate each system, and replace dirty filters, excessively worn parts and similar expendable items of the work.

3.4 Operating Instructions: Conduct a day walk–through instruction seminar for the Owner's personnel to be involved in the continued operation and maintenance of mechanical equipment and systems. Explain the identification system, operation diagrams, emergency and alarm provisions, sequencing requirements, seasonal provisions, security, safety, efficiency, and similar features of the systems.

3.5 Training: Contractor to provide training on all major equipment, controls, etc., as part of the contract.

3.6 Turn–Over of Operations: At the time of substantial completion, turn over the prime responsibility for operation of the mechanical equipment and systems to the Owner's operating personnel. However, until the time of final acceptance, provide one full–time employee, who is completely familiar with the work, to consult with and continue training with the Owner's personnel.

END OF SECTION

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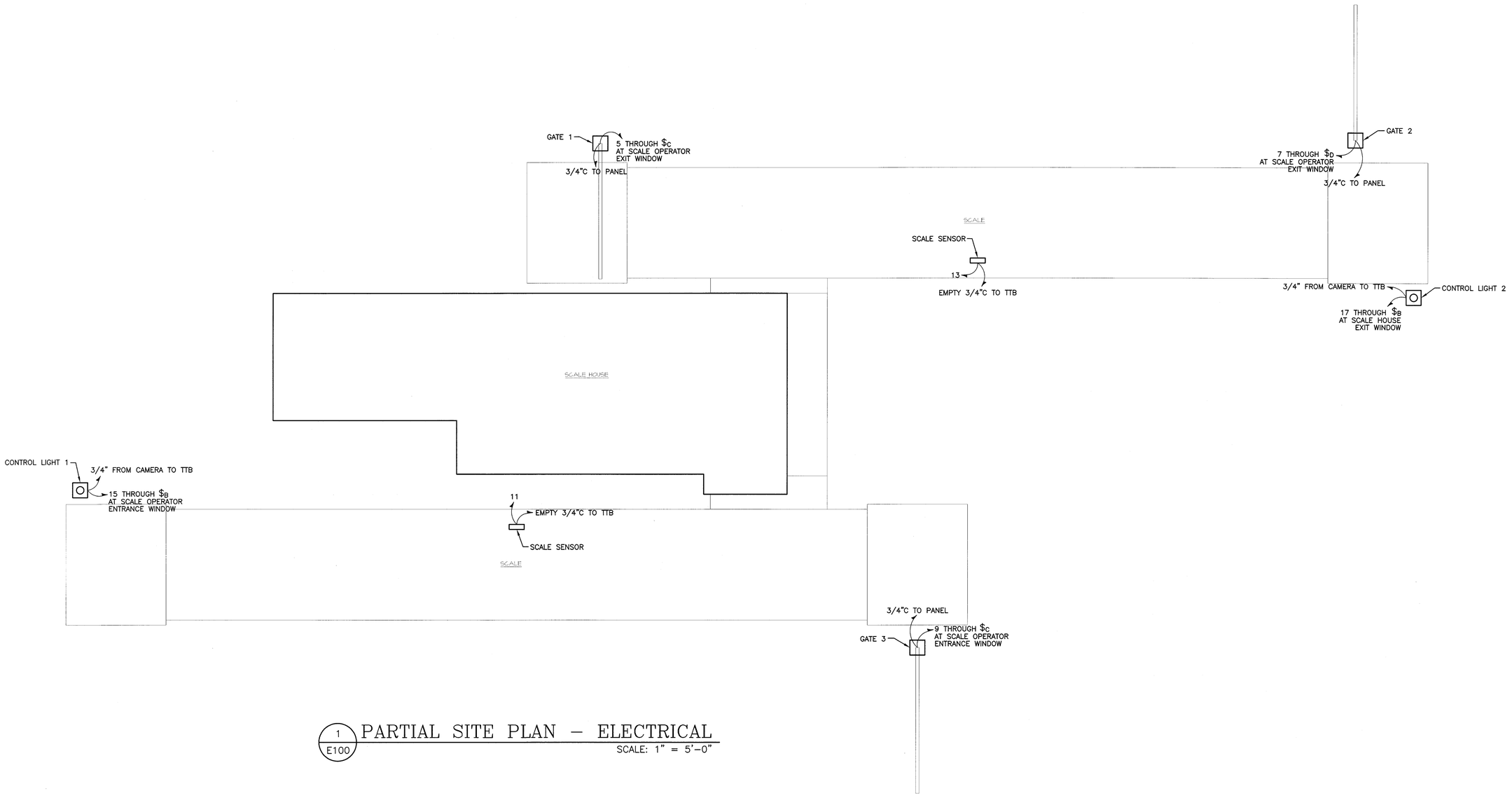
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 3494 7-29-10

STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
DATE: 7/29/10
SCALE: AS NOTED
DESIGNED BY: WMD
CADD BY: WMD
DESIGN REVIEW: _____
CONST. REVIEW: _____

BASIC HVAC REQUIREMENTS

SHEET
M301



1 / E100 PARTIAL SITE PLAN – ELECTRICAL

SCALE: 1" = 5'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 3494 ENGINEER
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STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN

HENDERSON COUNTY

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JOB NO.: 05734
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SCALE HOUSE
PARTIAL SITE PLAN
ELECTRICAL

SHEET
E100

SIMS GROUP
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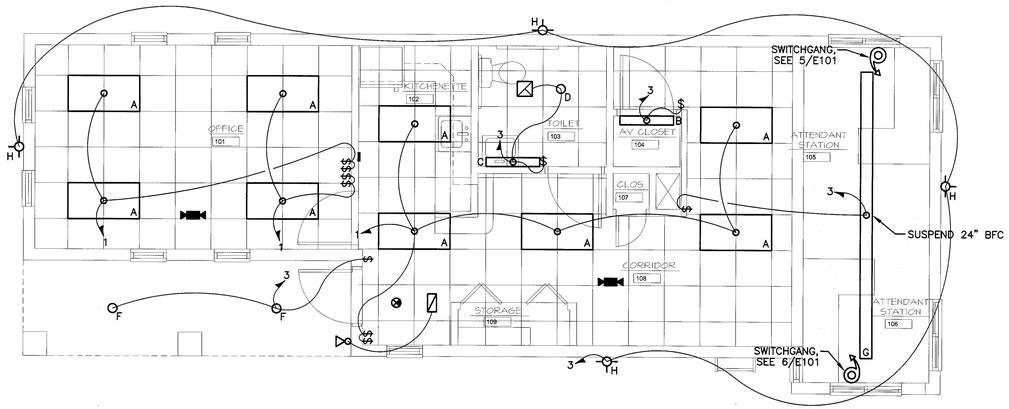
LIGHTING FIXTURE SCHEDULE

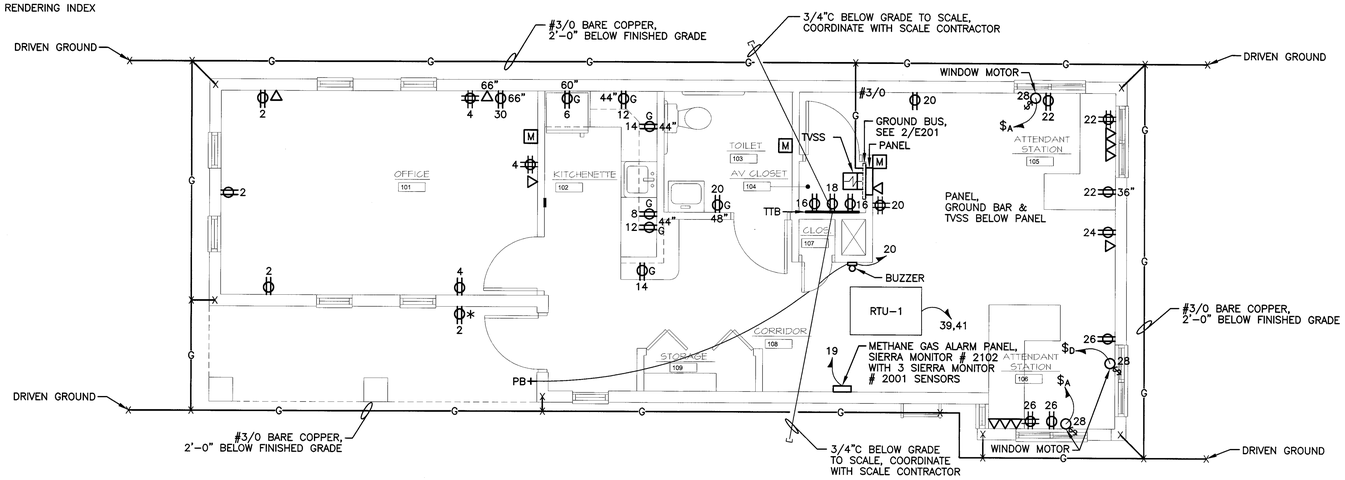
MARK	VOLT * AMPS PER FIXTURE	DESCRIPTION	BALLAST	LAMPS NO.	LAMPS CODE	LAMPS COLOR TEMP (K)	LAMPS CRI *
	–	EMERGENCY LIGHTING FIXTURE, CEILING MOUNT, NICAD BATTERY, SELF DIAGNOSTIC, CHLORIDE # CLB12N25–WB–2–AD	–	2	12 WATT SUPPLIED W/ FIXTURE	–	–
	–	EXIT LIGHT, LED LAMPS, PLASTIC HOUSING, NICAD BATTERY, SELF DIAGNOSTIC, COORDINATE COLORS WITH ARCHITECT, CHLORIDE # SLN–AD	–	–	SUPPLIED W/ FIXTURE	–	–
	–	12V REMOTE EGRESS HEAD, POWERED FROM BATTERY PACK MOUNTED ABOVE CEILING, DIE CAST ALUMINUM SHIELD AND BASE, ADJUSTABLE, CHLORIDE # CEFBK BATTERY – 120/277Y, LEAD CALCIUM, 75W OUTPUT FOR 1 1/2 HOURS, CHLORIDE # CPM75LW	–	1	20MR16WF	–	–
A	96	2x4 LAYIN TROFFER, 3" SEMI SPECULAR PARABOLIC LOUVER, WILLIAMS # HE3G–D24–332–36S	TWO ELECTRONIC	3	F032T8	3500	85
B	50	WALL MOUNT, 3' LONG x 6" WIDE x 4 1/2" DEEP, ACRYLIC PRISMATIC DIFFUSER, WILLIAMS # 20–3–225–A	ELECTRONIC	2	F025T8	3500	85
C	50	WALL MOUNT, 3' LONG x 6" WIDE x 4 1/2" DEEP, ACRYLIC PRISMATIC DIFFUSER, WILLIAMS # 20–2–225–A	ELECTRONIC	2	F032T8	3500	85
D	26	6"ø APERTURE RECESSED DOWNLIGHT, VERTICAL LAMP, SEMI SPECULAR REFLECTOR, INFINITY # PV60–126Q	ELECTRONIC	1	26CFT	3500	82
F	32	6"ø APERTURE RECESSED DOWNLIGHT, VERTICAL LAMP, SEMI SPECULAR REFLECTOR, INFINITY # PV60–132T–EB	ELECTRONIC	1	32CFT	3500	82
G	224	16" LONG x 8" WIDE x 1 1/2" DEEP, 70% INDIRECT, 30% DIRECT ILLUMINATION, CABLE SUSPENDED, LEDALITE # 7406 F02 Q 16 1 W	ELECTRONIC	8	F028T5	3500	82
H	125	WALL PACK, CAST ALUMINUM BODY, IMPACT RESISTANT PRISMATIC BOROSILICATE GLASS LENS, PHOTOCELL, INFINITY # WP1–MH–100–MED–PO	MAGNETIC	1	100MH–P5	–	–

NOTES:
1. ELECTRONIC BALLASTS FOR T8 LAMPS SHALL BE INSTANT–START MANUFACTURED BY ADVANCE, SYLVANIA, OR UNIVERSAL. SEE NOTE 7.
2. BALLASTS SHALL BE 120 VOLTS UNLESS OTHERWISE NOTED.
3. SEE ARCHITECT'S REFLECTED CEILING PLAN FOR PRECISE FIXTURE LOCATIONS.
4. COLOR/FINISH OPTIONS SHALL BE SELECTED BY ARCHITECT.
5. EXIT SIGNS: COORDINATE COLORS AND MOUNTING WITH ARCHITECT.
6. FIXTURES WITH TWO BALLASTS SHALL ACCOMMODATE DUAL–LEVEL SWITCHING.
7. ALL FLUORESCENT AND HID FIXTURES SHALL BE EQUIPPED, ON THE LINE SIDE OF THE BALLAST, WITH SEPARABLE CONNECTORS OR A DISCONNECT SWITCH THAT BREAKS BOTH HOT AND NEUTRAL.

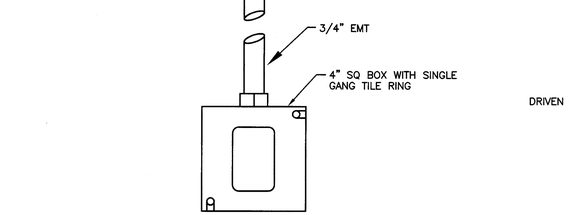
* CRI = COLOR RENDERING INDEX



1 / E101 FLOOR PLAN – LIGHTING
SCALE: 1/4" = 1'–0"

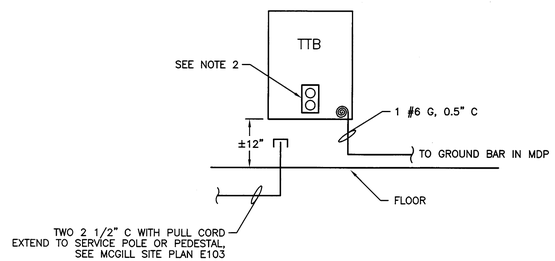


2 / E101 FLOOR PLAN – POWER
SCALE: 1/4" = 1'–0"

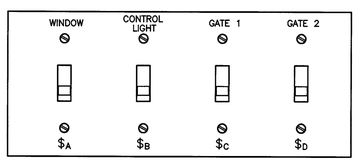


NOTES:
1. BOX FITTINGS AND CONDUIT PROVIDED BY EC. JACKS, PLATE, AND CABLE PROVIDED BY OWNER.
2. MOUNT 16" AFF UNLESS OTHERWISE NOTED.

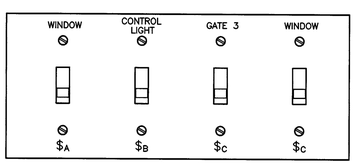
3 / E101 DATA/COMM OUTLET DETAIL
NOT TO SCALE



4 / E101 TELEPHONE TERMINAL BOARD
NOTES:
1. 3'x4'x3/4" PLYWOOD BACKBOARD WITH GRAY FIRE–RETARDANT PAINT.
2. DUPLEX RECEPTACLE SUPPLIED BY DEDICATED CIRCUIT. SEE PLAN FOR CIRCUIT NUMBER.
NOT TO SCALE



5 / E101 SWITCHGANG EXIT WINDOW
NOTE:
1. SWITCH PLATE SHALL BE STAINLESS STEEL. ENGRAVE PLATE IN BLACK LETTERS WITH FUNCTION OF EACH SWITCH.
2. SWITCHES A & B SHALL BE 1P–201, SPDT CENTER OFF.
NOT TO SCALE



6 / E101 SWITCHGANG ENTRANCE WINDOW
NOTE:
1. SWITCH PLATE SHALL BE STAINLESS STEEL. ENGRAVE PLATE IN BLACK LETTERS WITH FUNCTION OF EACH SWITCH.
2. SWITCHES A & B SHALL BE 1P–201, SPDT CENTER OFF.
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 3494 RMT E. MORGAN
2.21.11

STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
DATE: 10/14/10
SCALE: AS NOTED
DESIGNED BY: REM
CADD BY: EAO
DESIGN REVIEW: _____
CONST. REVIEW: _____

SCALE HOUSE
FLOOR PLAN
ELECTRICAL

SHEET
E101

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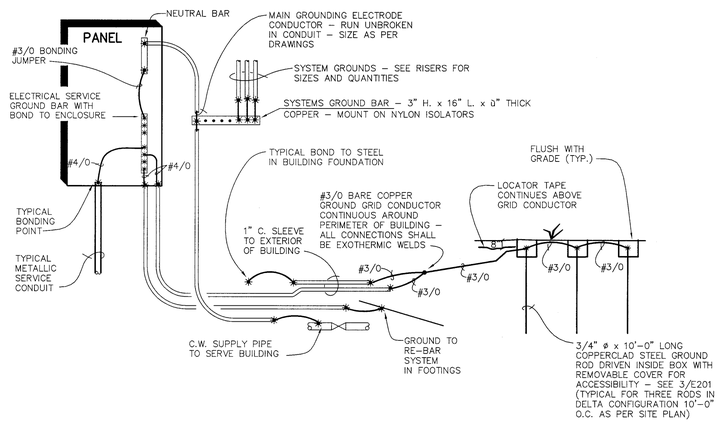


2 / E201 GROUNDING/BONDING DETAIL

NOT TO SCALE

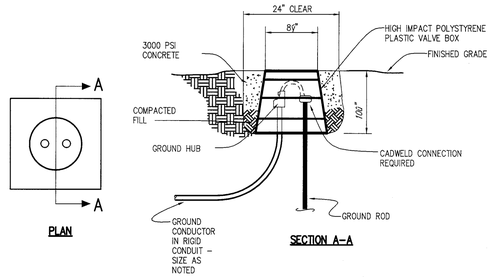
ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
$	SINGLE POLE TOGGLE SWITCH, BRASS TERMINAL SCREWS, 20 A PASS & SEYMOUR # PS20AC1
$$	TWO $ OR $3 FOR DUAL-LEVEL SWITCHING.
	RECEPTACLE, BRASS STRAP AND BRASS SCREWS, 20 AMP. PASS & SEYMOUR # PS5362
G	RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTING, 20 AMP. AUTO SELF TEST HUBBELL # GFST20
	TWO
*	RECEPTACLE, 20-AMP. GFCI, WEATHER RESISTANT PASS & SEYMOUR #2095TRWR ALUMINUM COVER WP-IN-USE # WP26M
	HEAVY DUTY SAFETY SWITCH, FUSIBLE, 240 V, EQUIPMENT GROUND. CLASS R REJECTION KIT NEMA 3R IF OUTSIDE, SEE NOTE 3
	DATA/COMM OUTLET, INSTALL BOX AND 3/4" CONDUIT WITH PULL CORD TO ACCESSIBLE AREA OR TO TTB AS REQUIRED. TERMINATE CONDUIT WITH BUSHING IF STUBBED OUT ABOVE CEILING OR BELOW FLOOR. BOX AND CONDUIT BY EC. JACKS, PLATE, AND CABLE BY OWNER'S TELEPHONE CONTRACTOR.
TTB	TELEPHONE TERMINAL BOARD. SEE 4/E101
	EXHAUST FAN OR FAN/LIGHT SUPPLIED AND INSTALLED BY MC. CONNECTED BY EC.
	OUTLET BOX WITH 20A SINGLE POLE TOGGLE SWITCH AS DISCONNECT MEANS
	TVSS, 120/240V, THOR # TSNC100
PB	PUSH BUTTON AND BUZZER, NUTONE # LA130WH
G	BARE COPPER GROUND
M	METHANE GAS DETECTOR, MOUNT 12" BELOW CEILING, WIRE IN 1/2"C TO METHANE GAS ALARM PANEL

NOTES:
1. WALLPLATES SHALL BE NYLON U.O.N.
2. COLORS FOR DEVICES AND WALLPLATES SHALL BE SELECTED BY ARCHITECT U.O.N.
3. SAFETY SWITCHES: UNLESS OTHERWISE NOTED, FUSE WITH BUSS # FRN-R. INSTALL CLASS R REJECTION KIT.

PANEL SCHEDULE

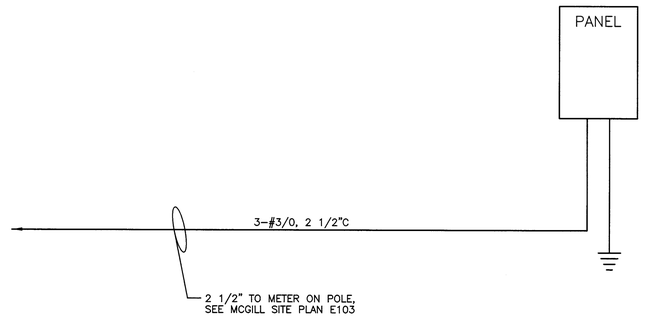
PANEL DESIGNATION: PANEL | LOCATION: ATTENDANT | ENCLOSURE: ■ NEMA 1 ☐ NEMA 3R
VOLTAGE RATING: 120/240 | BUS RATING: AMPS | ☐ MLO ■ MCB | PHASE: 1 | NO. OF WIRES: 3
TYPE: ■ NQ ☐ NEHB ☐ I-LINE | MOUNTING: ☐ SURFACE ■ FLUSH | INTERRUPTING RATING: 10,000 AMPS RMS FULLY RATED | SPECIAL FEATURES: 1. FRAMED AND GLAZED DIRECTORY | OTHER REQTS: 1. COPPER BUS 2. BOLT-ON C/B 3. SINGLE-POLE C/B 20 AMP U.O.N. 4. 100% GROUND BUS

CIRC. NO	LOAD	CB	PHASE A VA	PHASE B VA	CB	LOAD	CIRC. NO
1	LIGHTING	-	1374		-	RECEPTACLE	2
			720				
3	LIGHTING	-		1220	-	RECEPTACLE	4
				900			
5	POWER FOR SECURITY GATE 1	-	1176		-	RECEPTACLE	6
			1200				
7	POWER FOR SECURITY GATE 2	-		1176	-	RECEPTACLE	8
				1200			
9	POWER FOR SECURITY GATE 3	-	1176		-	SPARE	10
			-				
11	SCALE 1	-		1000	-	RECEPTACLE	12
				1000			
13	SCALE 2	-	1000		-	RECEPTACLE	14
			1000				
15	CONTROL LIGHT 1	-		100	-	RECEPTACLE	16
				800			
17	CONTROL LIGHT 2	-	100		-	RECEPTACLE	18
			800				
19	METHANE GAS ALARM PANEL	-		100	-	RECEPTACLE	20
				720			
21	SPACE	-	-		-	RECEPTACLE	22
			720				
23	SPACE	-		-	-	RECEPTACLE	24
				800			
25	SPACE	-	-		-	RECEPTACLE	26
			800				
27	SPACE	-		-	-	WINDOW MOTOR	28
				200			
29	SPACE	-	-		-	MONITORS	30
			500				
31	SPACE	-		-	-	SPARE	32
				-			
33	SPACE	-	-		-	SPARE	34
			-				
35	WATER HEATER	-		1250	-	SPARE	36
	2P-20A, 2-#12, #12G, 3/4"C		1250	-		SPACE	38
			-				
39	RTU-1	-		5004	-	TVSS	40
	2P-80A, 2-#4, #8G, 1 1/4"C		5004	-		2P-30A, 3-#10, #10G, 3/4"C	
			-				
	TOTAL CONNECTED LOAD 32,290 VA		16,820	15,470			
	TOTAL CONNECT LOAD 134 AMP						



3 / E201 GROUND ROD ENCLOSURE DETAIL

NOT TO SCALE



1 / E201 ELECTRICAL SERVICE RISER DIAGRAM

NOT TO SCALE

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 3494 RALPH E. MORGAN
10.14.10

STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
DATE: 10/14/10
SCALE: AS NOTED
DESIGNED BY: REM
CADD BY: EAO
DESIGN REVIEW: ———
CONST. REVIEW: ———

SCALE HOUSE
ELECTRICAL
SCHEDULES & DETAILS

SHEET
E201

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SECTION 16010

BASIC ELECTRICAL REQUIREMENTS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

A. Basic Electrical Requirements specifically applicable to Division 15 and 16 Sections, in addition to Division 1 – General Requirements.

1.2 SCOPE OF WORK

A. Provide conductors, panels, lighting, wiring devices, fusible safety switches and other required materials and labor to produce complete and operating electrical system as shown on drawing. Coordinate service with utility.

Provide conduit for controls for all equipment in project (review HVAC sheets for HVAC control locations). Coordinate conduit installation with HVAC contractor prior to installation.

Provide power wiring and conduit for all equipment in project.

B. Obtain all permits, pay all fees and request inspection from authority having jurisdiction.
C. All work and materials shall be guaranteed for one year from date of substantial completion.
D. Coordinate electrical service and meter installation with utility.
E. Provide temporary power during construction. The Owner is to be responsible for bill.

1.3 WORK SEQUENCE

A. Coordinate construction and utility outages (if any) with Owner, Engineer, all other trades, and utility companies. After hours work may be required to interrupt service.
B. Visit site before submitting bid to confirm existing conditions. Notify Engineer of discrepancies in the Contract Documents and existing conditions.

1.4 SUBMITTALS

A. Submit under provisions of Contract Documents.
B. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittal. Identify items with marks to match those shown on drawings.
C. Mark dimensions and values in units to match those specified.
D. Architect shall approve all colors.
E. All submittals shall have the Contractor's stamp, with approval signature.
F. Highlight deviations from specified materials.
G. Shop Drawings: 6 sets, including 3 for maintenance manuals. See H below for materials included.
H. Product Data: 6 sets, including 3 sets for maintenance manuals. Data shall include the following:

Lighting Fixtures	UL Designs for Sealing Penetrations thru all rated construction
Wiring Devices	
Panelboards	
Disconnect Switches	

I. Certifications: 3 copies
J. Test Reports: 3 copies
K. Warranties (Guarantees): 6 copies, including 3 for maintenance manuals.
L. Maintenance Manuals: 3 complete sets in loose–leaf 3–ring binders, with rigid permanent vinyl covered back and front. Separators with index tabs and loose–leaf sheet protectors shall be provided. One set shall have all sheets individually encased in clear, plastic document protectors.

1.5 REGULATORY REQUIREMENTS

A. Conform to applicable North Carolina State and Local Building Codes.
B. Fire Protection: Conform to NFPA 72.
C. Electrical: National Electric Code, NFPA 70.
D. Life Safety Code, NFPA 101.
E. All Codes shall be the latest edition.
F. The Contractor shall install all materials per the State and Local Building Code. Any work that does not comply shall be made to comply at the contractor's expense.
G. All equipment shall be UL–approved for purpose specified.
H. Install all materials per manufacturer's instructions.
I. Telephone installation and materials shall be in accordance with and coordinated with utility.
J. Electrical service entry shall be in accordance with and coordinated with utility providing service.

1.6 PROJECT/SITE CONDITIONS

A. Install Work in locations shown on Drawings, unless prevented by Project conditions.
B. Prepare record drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before proceeding. Submit all changes on Record Documents as a requirement of Project Closeout.
C. Refer to Architectural Drawings for dimensions, Locations, cabinets, etc. Do not scale Electrical Drawings.
D. Conceal all materials except where the Architect/Engineer grants specific permission to do otherwise.
E. Arrange electrical work in a neat, well organized manner with conduit running parallel with primary lines of the building construction.
F. Locate operating and control equipment properly to provide easy access, and arrange electrical work with adequate access for operation and maintenance.
G. Give right–of–way to piping which must slope for drainage.
H. Advise other trades of openings required in their work for the subsequent move–in of large units of electrical work (equipment).
I. Coordination Drawings: For locations where several elements of electrical (or combined mechanical and electrical) work must be sequenced and positioned with precision in order to fit into the available space, prepare coordination drawings (shop drawings) showing the actual dimensions (at accurate scale) required for the installation. Prepare and submit coordination drawings prior to purchase–fabrication–installation of any of the elements involved in the coordination.

1.7 SUBSTITUTIONS:

All products listed are to establish design and quality standards, not to limit submittals. Substitutions may be accepted if approved as equivalent. Contact engineer prior to bid with any questions. If substitutes are not submitted within 14 days after the bid is accepted, then the equipment shall be provided as specified. Contractor submitting substitutions shall be responsible for any additional cost resulting from the substitution.

1.8 CONTROL DATA: Provide control diagrams and wiring diagrams where applicable; include description of control systems, catalog data, maintenance, and calibration instruction for all components.

Provide name and address of Controls manufacturer and installer.

1.9 MAINTENANCE INSTRUCTION: A typewritten form of instructions for maintenance of the systems in itemized form and with time schedule for maintenance work, shall be furnished. The instructions shall list each item of equipment requiring inspection, lubrication, or service and describe the performance of such maintenance.

The operating personnel shall be instructed in the care of the system in accordance with the typewritten instructions.

1.10 EXCAVATING FOR ELECTRICAL WORK

A. General: The work of this article is defined to include whatever excavating and backfilling (but excluding insulating backfill) is necessary to install the electrical work. Coordinate the work with other excavating and backfilling in the same area, including dewatering, floor protection provisions, and other temporary facilities. Coordinate the work with other work in the same area, including other underground services, landscape development, paving, and floor slabs on grade. Coordinate with weather conditions and provide temporary facilities needed for protection and proper performance of excavating and backfilling.
B. General Standards: Except as otherwise indicated, comply with the applicable provisions of the Division 2 sections, for plumbing work excavating and backfilling. Refer instances of uncertain applicability to the Engineer for resolution before proceeding.
C. Rock Excavation shall be defined as the removal of a formation that cannot be excavated without systematic drilling and blasting or without the use of pneumatic tools. All rock excavation/removal shall be performed by the General Contractor. The Plumbing, Mechanical, and Electrical subcontractors shall lay out their work and perform all normal or earth excavation. Should these subcontractors encounter rock (bulk or trench), it shall be removed by the General Contractor using allowable funds. The General Contractor shall be responsible for providing fill material for backfill of rock excavations.
D. Sequencing: Delay backfill and encasement of conduit until testing of conductors has been completed.

2. PART 2 GENERAL DESCRIPTION OF WORK

2.1 Coordinate work with other Trades.

2.2 General:

A. Provide all new lighting fixtures, wiring devices, conductors, switches, receptacles, starters, disconnects, fuses, etc. and other required materials.
Coordinate electrical requirements for equipment supplied by other trades prior to ordering electrical materials.
B. Fire–stop penetrations through rated assemblies. See Architectural sheets to locate rated assemblies.
C. Identify major equipment with Lamicor labels.
D. Provide typed panel directories.
E. Gang mount switches. Provide continuous switchplate.
F. Electrical Contractor shall provide all penetrations, etc. and patching required to install electrical work.
H. Coordinate receptacle locations.
I. Provide electric service entry.

2.3 Conductors:

A. Single conductors shall be copper with THHN/THWN insulation (unless otherwise noted)
B. Single conductors used for feeders shall have neutrals of same size as phase conductors or per Section 220–22 of the NEC.
C. Use #10 AWG conductors for 20 amp branch circuits longer than 75 feet.
Power conductors shall be #12 AWG minimum.
D. Provide equipment grounding conductor with all circuits sized in accordance with NEC.
E. Conductor fill shall be limited to two phase conductors, associated neutral(s) and ground.
F. Within stud partition walls, 'MC' cable may be used.

2.4 Conduit:

A. Below grade: Schedule 40 PVC for horizontal runs with IMC risers. Protect below grade runs per the NEC. Provide a warning tape 6" below grade.
Service entry conduit shall be rigid steel.
B. Inside building above floor where not subject to physical damage, use electrical metallic tubing assembled with all steel compression fittings.
C. Short pieces of MC cable may be used where flexible connections are required to pieces of vibrating equipment in dry locations. Used liquid tite Greenfield in wet locations.
D. Galvanized rigid steel conduit with threaded fittings shall be used where subject to physical damage or in wet locations.
E. Support conduit with threaded rods and hangers, trapeze hangers, channel and clamps or other approved method from building structure.

2.5 Outlet Boxes

A. Switch boxes may be either single piece galvanized steel masonry boxes or alternatively 2 1/8" deep 4" square boxes with appropriate tile ring.
B. Receptacle boxes shall be 2 1/8" deep 4" square boxes with appropriate tile ring.
C. All boxes shall be rigidly supported to substrate framing and shall finish within 1/8" of the finished surface.

2.6 Support lighting fixtures from building structure.

3. PART 3 ELECTRICAL WORK CLOSEOUT

3.1 General: Refer to the Division 1 sections for general closeout requirements. Maintain a daily log of operational data on electrical equipment and systems through the closeout period; record hours of operation, assigned personnel, fuel consumption and similar information; submit copy to Owner.

3.2 Record Drawings: For electrical work, give special attention to the complete and accurate recording of underground conduit, circuits, and other concealed and non–accessible work, service entry, panels, lighting fixtures, disconnects, other major pieces of equipment, and work of change orders where not shown accurately by contract documents. Submit to Engineer at end of project one set of reproducible sepias that show all recorded changes in the electrical work.

3.3 Closeout Equipment/Systems Operations: Sequence operations properly so that work of project will not be damaged or endangered. Coordinate with seasonal requirements. Operation each item of equipment and each system in a test run of appropriate duration (with the Engineer present, and with the Owner's operating personnel present), to demonstrate sustained,satisfactory performance. Adjust and correct operations as required for proper performance. Clean equipment and lighting fixtures.

3.4 Operating Instructions: Conduct a day walk–through instruction seminar for the Owner's personnel to be involved in the continued operation and maintenance of electrical equipment and systems. Explain the identification system, operation diagrams, emergency and alarm provisions, sequencing requirements, seasonal provisions, security, safety, efficiency, and similar features of the systems.

3.5 Training: Contractor to provide training on all major equipment, controls, etc., as part of the contract.

3.6 Turn–Over of Operations: At the time of substantial completion, turn over the prime responsibility for operation of the electrical equipment and systems to the Owner's operating personnel. However, until the time of final acceptance, provide one full–time employee, who is completely familiar with the work, to consult with and continue training with the Owner's personnel.

END OF SECTION

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NORTH CAROLINA PROFESSIONAL SEAL 3494 7.29.10

STONEY MOUNTAIN ROAD LANDFILL FACILITY
CAPITAL IMPROVEMENTS PLAN
HENDERSON COUNTY
HENDERSON COUNTY, NORTH CAROLINA

JOB NO.: 05734
DATE: 7/29/10
SCALE: AS NOTED
DESIGNED BY: WMD
CADD BY: WMD
DESIGN REVIEW:
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SCALE HOUSE
ELECTRICAL
SCHEDULES & DETAILS

SHEET
E301