Draper Aden Associates
Engineering • Surveying • Environmental Services

46 W. Washington Street
Coats, North Carolina 27521
(910) 897-7070 • Fax (910) 897-6767
www.daa.com

Permit No.	Date	Document ID No.
43-07T	**January 24, 2014**	**20454**

Received by an e-mail
Date: **January 24, 2014**
Solid Waste Section
Raleigh Central Office

CTCPN#: 03002B

January 24, 2014

Ming-Tai Chao, PE
Solid Waste Section
217 W Jones St
Raleigh, NC 27699
(via email)

RE: Transfer Station Asbuilt Certification
Transfer Station Rehab Project
Dunn-Erwin Landfill, Permit 43-07T

Mr. Chao,

On behalf of Harnett County, we present documentation that the Dunn Erwin Landfill Transfer Station (Permit No. 43-07T-Transfer-1997) has been constructed in accordance with the Conditions of Permit to Construct as outlined in the Permit to Construct and Operate Letter issued on March 28, 2013 - SWS Document ID# 18605.

Attachment 2 of March 28, 2013 letter addresses several conditions of the Permit to Construct. Those pertaining to the certification of construction are as follows:

1.A. Not increase the capacity or overall function of the transfer station.

The project has not resulted in an increased capacity or change of function of the transfer station.

B. Erect a 20-feet-long pre-engineered metal building, including vertical walls and roof components connecting to the south portion of the existing station building and enclosing the previously unsheltered area to minimize stormwater in contacting waste operation.

Completed in substantial accordance with the approved drawings.

C. Extend vertically the existing concrete wall on the north end of the building to the designed elevation as shown on SHEET 2.2.5.

Completed in substantial accordance with the approved drawings.

D. Improve tipping floor drainage by pouring and re-grading entire concrete floor inside the station, abandoning and filling the exiting trench drain with concrete in place, and draining leachate and wash-down liquid to the two new drainage receptors.

Completed in substantial accordance with the modified design (Doc ID# 19952) as approved by the SWS (Doc ID# 19953).

E. Plug and abandon the existing drain lines which carry leachate and wash-down liquid from the station trench drain to two existing underground strorage tanks (USTs).

Completed in substantial accordance with the approved drawings. The pump station is not currently operational and the County will continue current pump and haul operations from the new USTs.

F. Install new drain lines to carry leachate and wash-down liquid from the new receptors to two new 3000-gallon USTs.

Completed in substantial accordance with the approved drawings.

3. The Permittee shall prepare the Construct Record Report and as-built drawings of the Transfer Station Rehabilitation Project according to the Project Manual and certified by a Professional Engineer registered in the State of North Carolina.

As-Built drawings can be found attached. Construction Record Inspection Reports have been submitted to the Section on an ongoing basis throughout the project from the beginning of construction activities. The last set of Inspection Reports were submitted to the Section on October 10, 2013 incorporating all reports through October 7, 2013. Attached you will find the remainder of the Inspection Reports covering October 8, 2013 through December 20, 2013. On December 20, 2013, Mr. Dennis E. Shackelford, Eastern District Supervisor, performed an inspection of the Transfer Station and by written email correspondence on December 23, 2013 approved the Transfer Station for operation. A certification statement can be found on the following page.

4. The Permittee shall submit to the Section the Construct Record Report and as-built drawings for a review and approval within 30 days after the project related documents are completed received by the Permittee.

Redlined drawings were obtained by our office after project completion from the Contractor. The redlined changes have been incorporated into a final As-Built set which are attached.

Should you need anything that is not contained in this package, please let me know either by email (tclayton@daa.com) or by phone (910-897-7070) and I will respond promptly.

Sincerely,

C. Tyrus Clayton, Jr., PE

enclosures

cc: file
Amanda Bader, Harnett County

I hereby certify that the Dunn Erwin Transfer Station Rehabilitation Project has been constructed in substantial accordance with the plans and specifications approved by the Solid Waste Section except as noted on the "AS BUILT" drawings. Furthermore, the noted changes and/or revisions do not adversely affect the intended performance of the facility.

NORTH CAROLINA PROFESSIONAL SEAL 026909 ENGINEER C. TYRUS CLAYTON, JR.

1-24-2014

For clarification purposes, C. T. Clayton, Sr, PE, Inc. was acquired by Draper Aden Associates effective January 1, 2014. As such this transmittal includes documents both on CTC and DAA letterhead.

Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project:	Dunn Erwin Landfill CAP Projects		
Job No.:	3002B	**Date:**	November 1, 2013
Location:	Dunn-Erwin Landfill, Dunn, NC		
Visit by:	RLS	**Page:**	1 of 1

Weather Conditions: Partly Cloudy, 68 degrees

Summary of Activities and Test Results:

Arrived onsite in the morning to check the status of the cracks in the Eucotop. I reveiwed the previous crack location sketch I had made and looked for any additonal cracks or worsening. I did not notice any changes.

pictures attached.

Copies: file book

Signature:

Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project:	Dunn Erwin Landfill CAP Projects		
Job No.:	3002B	**Date:**	November 1, 2013
Location:	Dunn-Erwin Landfill, Dunn, NC		
Visit by:	RLS	**Page:**	1 of 1

Weather Conditions: Partly Cloudy, 68 degrees

Summary of Activities and Test Results:

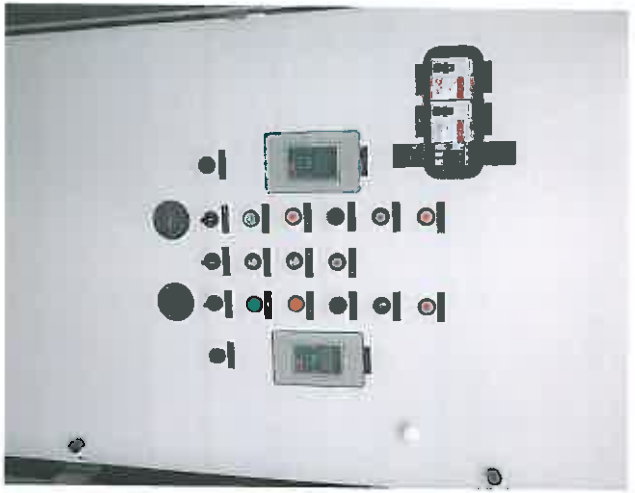
Arrived onsite in the afternoon to review progress on electrical items at the pump station and the sumps.

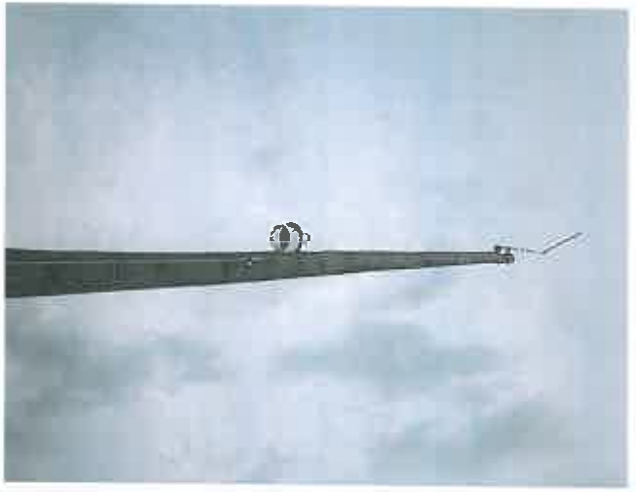
Electrical is about 75% complete. I took pictures of the progress.

pictures attached.

Copies: file book

Signature:





Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project: Dunn Erwin Landfill CAP Projects

Job No.: 3002B | **Date:** December 5, 2013

Location: Dunn-Erwin Landfill, Dunn, NC

Visit by: CTC Jr | **Page:** 1 of 1

Weather Conditions: Sunny, 50 degrees

Summary of Activities and Test Results:

Arrived onsite and met with Joe Parda and Jonathan Temple. Third ARV had been installed and pump station was full of water. Joe indicated they had previously run both pumps successfully. We conducted a pump test on each pump. Results as follows:

Pump #1 2 min run time dropped water 94.5 in to 69.25 in = 25.25 in ==> ~220 gpm

Pump #2 2 min run time dropped water 91.5 in to 68.75 in = 22.75 in ==> ~200 gpm

We discussed scheduling the manufacturer back to conduct an official pump start up when sumps are operational

I stopped by and inspected the ARV installation.

pictures attached.

Copies: file book

Signature: C Tyson Clayton

Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project:	Dunn Erwin Landfill CAP Projects		
Job No.:	3002B	**Date:**	December 6, 2013
Location:	Dunn-Erwin Landfill, Dunn, NC		
Visit by:	RLS	**Page:**	1 of 1

Weather Conditions: Partly Cloudy, 50 degrees

Summary of Activities and Test Results:

Arrived onsite in the morning to discuss with Ralph and Randy different options of repairing the concrete apron. It was our opinion that any method used to speed up the project would be acceptable as long as the design intent and minimum standards were met.

I returned in the afternoon to witness the amount of work done during the day. The contractor's sub had approximately 5 men working on removing the defective work with jackhammers and concrete saws. Only a small portion had been removed with them working for approximately 5-6 hours.

Copies: file book

Signature:

Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project:	Dunn Erwin Landfill CAP Projects		
Job No.:	3002B	**Date:**	December 11, 2013
Location:	Dunn-Erwin Landfill, Dunn, NC		
Visit by:	CTC Jr	**Page:**	1 of 1

Weather Conditions: Sunny, 45 degrees

Summary of Activities and Test Results:

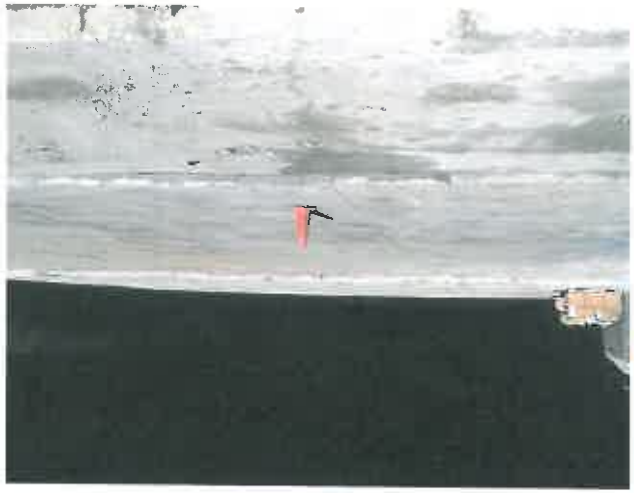
Arrived onsite. Demolition of apron areas completed. Crews currently installing form work for curb and gutter. Discussed schedule of pours with Ralph Barille. Curbing to be poured later today. Does not expect to pour slab until at least Monday, Dec. 16th. I delivered cold weather pour recommendation email from Dave Harris. Ralph indicated he had spoken with Dave and had scheduled for technician from Geotechnologies.

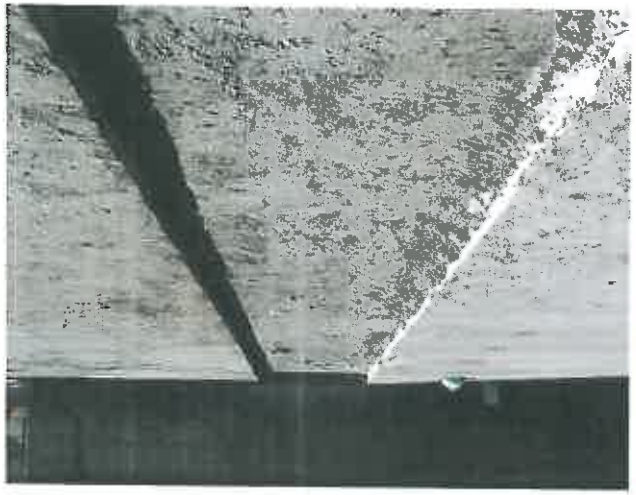
Power meter installed at rear sump service panel. Called Joe Parda and informed him of the install.

pictures attached.

Copies: file book

Signature: C Tyson Clayton





Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project:	Dunn Erwin Landfill CAP Projects		
Job No.:	3002B	**Date:**	December 12, 2013
Location:	Dunn-Erwin Landfill, Dunn, NC		
Visit by:	RLS	**Page:**	1 of 1

Weather Conditions: 45 degrees sunny

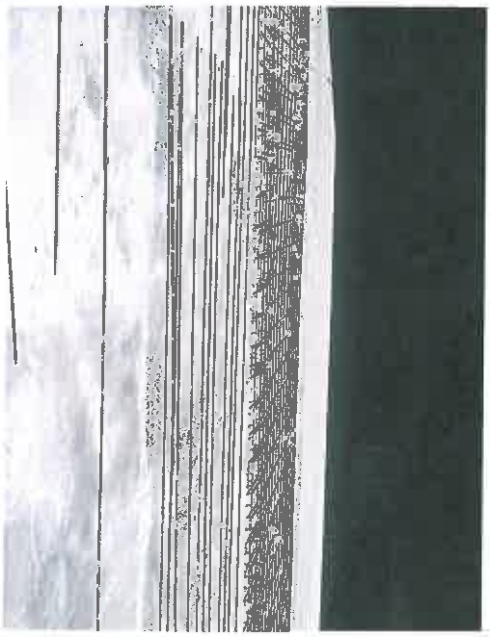
Summary of Activities and Test Results:

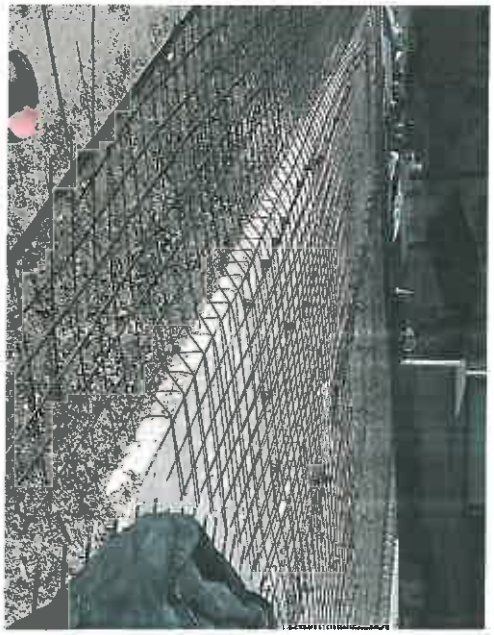
Arrived onsite in the afternoon to inspect progress. Curbing was poured yesterday afternoon and some of it was covered and some was uncovered. (Blankets). Ralph said the blankets had been pulled back to allow the sun to warm the concrete. The subcontractor was on-site preparing rebar. They plan to pour the apron slab tomorrow morning at 9:30AM.

pictures attached.

Copies: file book

Signature:





USE BY DATE
EUCO
FLEX-CON™
ACRYLIC LATEX BONDING ADMIXTURE
ADJUVANT LIANT À BASE DE LATEX ACRYLIQUE
ADITIVO LÁTEX ACRÍLICO PARA ADHERENCIAS

Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project: Dunn Erwin Landfill CAP Projects

Job No.: 3002B | **Date:** December 16, 2013

Location: Dunn-Erwin Landfill, Dunn, NC

Visit by: RLS | **Page:** 1 of 1

Weather Conditions: 45 degrees sunny

Summary of Activities and Test Results:

Visited the site multiple times throughout the day checking on pour progress. First thing in the morning the subcontractor was making last minute preparations and installing rebar. There was still some ice and water in the excavation area at the road tie-in so the pour was delayed till after 10AM to allow this tho thaw and dewater. A mudslab had been poured previously to prevent this area from getting soft and saturated.

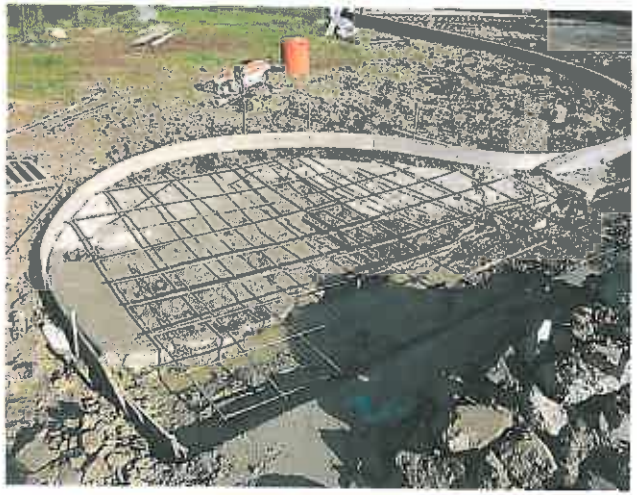
Pouring began after 10AM with use of a pump truck.

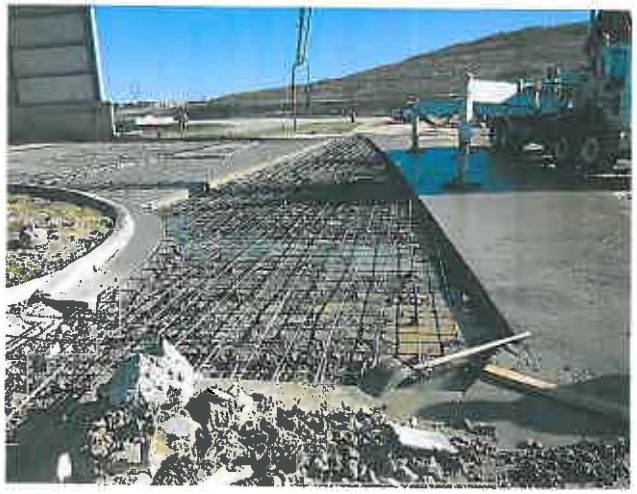
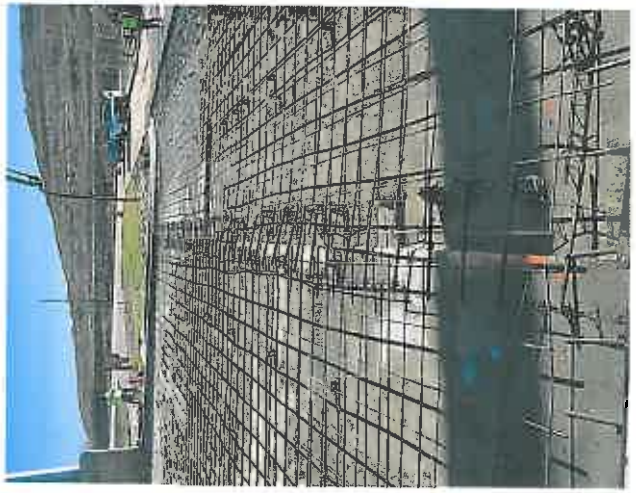
I met with Dave Harris and Ralph regarding the Eucotop repairs. Mr. Harris stated that he would return to view the repair work on Thursday when the subcontractor is scheduled to perform the work.

pictures attached.

Copies: file book

Signature:



Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project:	Dunn Erwin Landfill CAP Projects		
Job No.:	3002B	**Date:**	December 17, 2013
Location:	Dunn-Erwin Landfill, Dunn, NC		
Visit by:	RLS	**Page:**	1 of 1

Weather Conditions: 40 degrees sunny

Summary of Activities and Test Results:

Arrived on the site in the morning. Subcontractor was on site making saw cuts into the new apron slab. Other areas of the slab were covered in blankets. Spoke to Ralph, he was concerned that the subcontractor was not making progress on the Eucotop crack repairs and feared a delay in completing the project on time.

Copies: file book

Signature:

Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project:	Dunn Erwin Landfill CAP Projects		
Job No.:	3002B	**Date:**	December 18, 2013
Location:	Dunn-Erwin Landfill, Dunn, NC		
Visit by:	RLS	**Page:**	1 of 1

Weather Conditions: 40 degrees sunny

Summary of Activities and Test Results:

Arrived on the site in the morning. I spoke to Ralph who had one helper with him. He stated that he was going to try to begin the grinding of the cracks in the eucotop. The Eucotop had a layer of thick dust material on it from the apron pour activities and subsequent saw cutting. The Eucotop needed to be cleaned prior to grinding work. Ralph stated that he was going to try to get some additional manpower there to help.

Copies: file book

Signature:

Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project:	Dunn Erwin Landfill CAP Projects		
Job No.:	3002B	**Date:**	December 19, 2013
Location:	Dunn-Erwin Landfill, Dunn, NC		
Visit by:	RLS	**Page:**	1 of 1

Weather Conditions: 40 degrees sunny

Summary of Activities and Test Results:

Arrived on the site in the morning. I met with Ralph and Dave Harris of Geotechnologies. The majority of the cracks in the Eucotop had been ground into a v-channel per Dave's recommendation. I noticed an additional crack and requested that it be ground also. The quickstick epoxy was shaken per recommendations and applied to the cracks. As the viscous material made its way into the cracks more was applied as needed.

I asked Dave about two hairline cracks in the curbing and he stated that he was not concerned with them due to the reinforcement and does not foresee them getting worse and would not recommend repairing them at this time.

The owner was placing backfill around the now taller curbing. The Owner was also performing repair work on the metal trash bin at the rear of the Transfer Station.

A discussion was held regarding the cleaning of the saw cuts in the Eucotop. Mr. Harris recommended that the cuts be re-cut again to remove the existing debris if other methods of cleaning do not work. He plans to return tomorrow at 9:00 which is the planned time to perform the quickjoint installation.

Copies: file book

Signature:

Clayton, Sr., P.E., Inc.
Civil & Environmental Engineering
46 W. Washington Street
Coats, NC 27521

SITE VISIT REPORT

Project:	Dunn Erwin Landfill CAP Projects		
Job No.:	3002B	**Date:**	December 20, 2013
Location:	Dunn-Erwin Landfill, Dunn, NC		
Visit by:	RLS	**Page:**	1 of 1

Weather Conditions: 40 degrees sunny

Summary of Activities and Test Results:

Arrived on the site in the morning with the Owner, Contractor, and Mr. Dennis Shackleford. I gave Mr. Shackleford a tour of the Transfer Station and instructed him on the modifications made. The Contractor was busy sealing the saw cuts in the Eucotop with joint sealer. It was expressed that there would not be enough material, but that more would be picked up today to finish the job.

I returned in the afternoon to witness the remainder of the Eucotop joint sealing. The Owner's personnel was also on hand sealing the saw cuts within the approach apron concrete.

pictures attached.

Copies: file book

Signature:

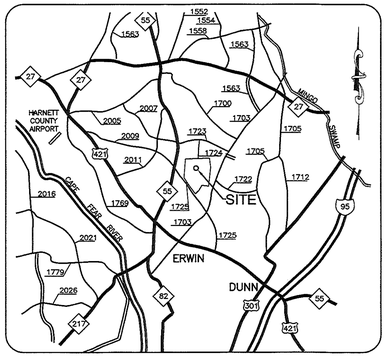
HARNETT COUNTY DUNN-ERWIN LANDFILL

PROJECT 2

DIVISION 2.1, CONVENIENCE CENTER IMPROVEMENTS
DIVISION 2.2, TRANSFER STATION REHABILITATION
SEPTEMBER 2012

NORTH CAROLINA 811 — North Carolina One-Call Center — Know what's below. Call before you dig.

CALL NORTH CAROLINA ONE CALL CENTER, 811 OR 800-632-4949, AT LEAST 48 HOURS BEFORE DIGGING OR EXCAVATION TO LOCATE ALL EXISTING UTILITIES.



VICINITY MAP
NOT TO SCALE

OVERALL PROJECT SITE MAP
SCALE: 1" = 40'

GENERAL SITE AND CONSTRUCTION NOTES:

1. EXISTING UTILITY SERVICES ARE NOT TO BE INTERRUPTED PRIOR TO APPROVAL BY THE PROPERTY OWNER AND ENGINEER. TEMPORARY UTILITY SERVICE SHALL BE AVAILABLE DURING INTERRUPTION. A MINIMUM NOTICE OF 72 HOURS IS REQUIRED PRIOR TO INTERRUPTION. WRITTEN PERMISSION FOR INTERRUPTION MUST BE GIVEN PRIOR TO PROCEEDING.
2. ENGINEER DOES NOT GUARANTEE THE ACCURACY OF UTILITIES SHOWN OR THAT ALL UTILITIES ARE SHOWN, ABOVE OR BELOW THE SURFACE. THE CONTRACTOR IS RESPONSIBLE FOR SUBSURFACE UTILITY LOCATION PRIOR TO CONSTRUCTION TO DETERMINE THE EXISTENCE AND/OR EXACT LOCATIONS, BOTH HORIZONTAL AND VERTICAL. CALL "NC ONE CALL" (1-800-632-4949) AT LEAST 48 HOURS PRIOR TO DIGGING OR EXCAVATION, AND CONTACT INDIVIDUAL UTILITY COMPANIES FOR ASSISTANCE IN LOCATION OF UTILITIES.
3. CONTRACTOR SHALL VERIFY THE LOCATIONS AND SIZES OF ALL EXISTING FEATURES PRIOR TO CONSTRUCTION. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY DIFFERENCE(S) FROM THAT SHOWN ON THE DRAWINGS. CONTRACTOR SHALL SUBMIT SCALED DRAWING(S) OF THE DIFFERENCE(S) OR FORMERLY UNKNOWN FEATURE(S) TO THE ENGINEER ALONG WITH A WRITTEN REQUEST FOR FURTHER INSTRUCTION AND DIRECTION.
4. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION ACTIVITIES.
6. ANY CONCRETE, ASPHALT, CURB & GUTTER OR OTHER TYPE OF PAVEMENT SHALL BE SAW-CUT AT EXTENT OF REMOVAL PRIOR TO THE REMOVAL. CONCRETE ITEMS SHALL BE SAW-CUT AT THE NEAREST CONTROL JOINT TO THE REMOVAL AREA.
7. CONTRACTOR SHALL COORDINATE ANY REQUIRED WORK, RELOCATION, INSTALLATION, OR REMOVAL OF EXISTING UTILITIES WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO THE BEGINNING OF CONSTRUCTION.
8. TIE-INS TO EXISTING PAVEMENT SHALL BE FLUSH AND EVEN. WHEN INSTALLING NEW ASPHALT TO EXISTING SURFACES, EXISTING SURFACES SHALL BE COATED WITH ASPHALT SPRAY TACK.
9. FINE-GRADE AREAS TO DRAIN TO INTENDED DRAINAGE STRUCTURES IN ORDER TO PREVENT ANY STANDING WATER. IF THERE IS ANY QUESTION ON THE COMPLETION OF THE FINAL GRADING, THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO CONSTRUCTION.

DIVISION 2.1 SHEET INDEX

SITE PLAN	2.1.1
DETAILS	2.1.2
DETAILS	2.1.3
DETAILS	2.1.4

DIVISION 2.2 SHEET INDEX

EXISTING CONDITIONS AND DEMOLITION PLAN	2.2.1
FLOOR PLAN	2.2.2
BULLETIN #15	2.2.2A
UTILITY PLAN	2.2.3
ELECTRICAL PLAN	2.2.4
ELEVATIONS	2.2.5
DETAILS	2.2.6

DESIGNED CTC Jr./RS	DATE: JANUARY 2012
DRAWN AEB	CTC PROJ. No. 03002B
CHECKED CTC Jr.	DWG FILE: 03002B Shingles Dump.dwg
PROJ. ENG. CTC Jr.	

NORTH CAROLINA PROFESSIONAL SEAL 028909 ENGINEER C. TYRUS CLAYTON, JR.

C. Tyrus Clayton, Jr. P.E.
1-24-2014 DATE

AS BUILT

Draper Aden Associates
Engineering • Surveying • Environmental Services
Coats, NC: 46 W. Weatherspoon Street, Coats, NC 27521, 910-897-7070 Fax: 910-897-6767, www.das.com
Blackstburg, VA; Richmond, VA; Hampton Roads, VA; Charlottesville, VA
FIRM # C-0861

HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

REVISIONS

DESIGNED BY:	CTC Jr.
DRAWN BY:	AEB
CHECKED BY:	CTC Jr.
SCALE:	NONE
DATE:	JANUARY 2012
PROJECT NUMBER:	R14150N-01G

EFFECTIVE JANUARY 1, 2014, C. T. CLAYTON, SR., P.E., INC., HAS MERGED WITH DRAPER ADEN ASSOCIATES.

P:\03002 Harnett County\03002B Corrective Action Plan CAP\CAD\As Built\03002B Shingles Dump As Built.dwg January 24, 2014 3:39:02 PM

TEMPORARY & PERMANENT SEEDING (TS) (PS)

TEMPORARY SEEDING SCHEDULE FOR LATE WINTER AND EARLY SPRING

DATES	SPECIES	RATE (LB/ACRE)
JAN 1 - MAY 1	RYE (GRAIN)	120
	KOBE LESPEDEZA	50

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4000 LB/ACRE SMALL GRAIN STRAW AND TACK WITH ASPHALT.

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING SCHEDULE FOR SUMMER

DATES	SPECIES	RATE (LB/ACRE)
MAY 1 - APR 15	GERMAN MILLET	40

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4000 LB/ACRE SMALL GRAIN STRAW AND TACK WITH ASPHALT.

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING SCHEDULE FOR FALL

DATES	SPECIES	RATE (LB/ACRE)
AUG 15 - DEC 30	RYE (GRAIN)	120

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1000 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4000 LB/ACRE SMALL GRAIN STRAW AND TACK WITH ASPHALT.

MAINTENANCE
REPAIR AND REFERTILIZE AND RESEED DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

PERMANENT SEEDING SCHEDULE FOR GRASS-LINED CHANNELS

DATES	SPECIES	RATE (LB/ACRE)
BEST AUG 15 - OCT 31 POSSIBLE FEB 1 - APR 15	TALL FESCUE	200

NURSE PLANTS
PRIOR TO MAY 1 OR AFTER AUG 15, ADD 40 LB/ACRE RYE (GRAIN).

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1000 LB/ACRE 10-10-10 FERTILIZER. OPERATE TILLAGE EQUIPMENT ACROSS THE WATERWAY.

MULCH
USE A ROLLED EROSION CONTROL PRODUCT TO COVER THE BOTTOM OF CHANNELS AND DITCHES AND STAPLE SECURELY. THE LINING SHOULD EXTEND ABOVE THE HIGHEST CALCULATED DEPTH OF FLOW.

MAINTENANCE
INSPECT AND REPAIR MULCH FREQUENTLY. REFERTILIZE IN LATE WINTER OF THE FOLLOWING YEAR. FOLLOW RECOMMENDATIONS OF SOIL TESTS OR USE 150 LB/ACRE OF 10-10-10. MOW REGULARLY TO A HEIGHT OF 2-4 INCHES.

PERMANENT SEEDING SCHEDULE FOR AREAS OTHER THAN CHANNELS

SPECIES	RATE (LB/ACRE) 3:1 AND STEEPER SLOPES	SLOPES FLATTER THAN 3:1
TALL FESCUE	100	80
SERICEA LESPEDEZA	30	20
KOBE LESPEDEZA	10	10
PENSACOLA BAHIAGRASS	25	NONE

AFTER AUGUST 15 USE UNSCARIFIED SERICEA SEED.

NURSE PLANTS
PRIOR TO MAY 1 OR AFTER AUG 15, ADD 40 LB/ACRE RYE (GRAIN).

SEEDING DATES

	BEST	POSSIBLE
FALL:	AUG 25 - SEP 15	AUG 20 - OCT 25
LATE WINTER:	FEB 15 - MAR 21	FEB 1 - APR 15

FALL IS BEST FOR TALL FESCUE AND LATE WINTER FOR LESPEDEZAS. OVERSEEDING OF KOBE LESPEDEZA OVER FALL-SEEDED TALL FESCUE IS VERY EFFECTIVE.

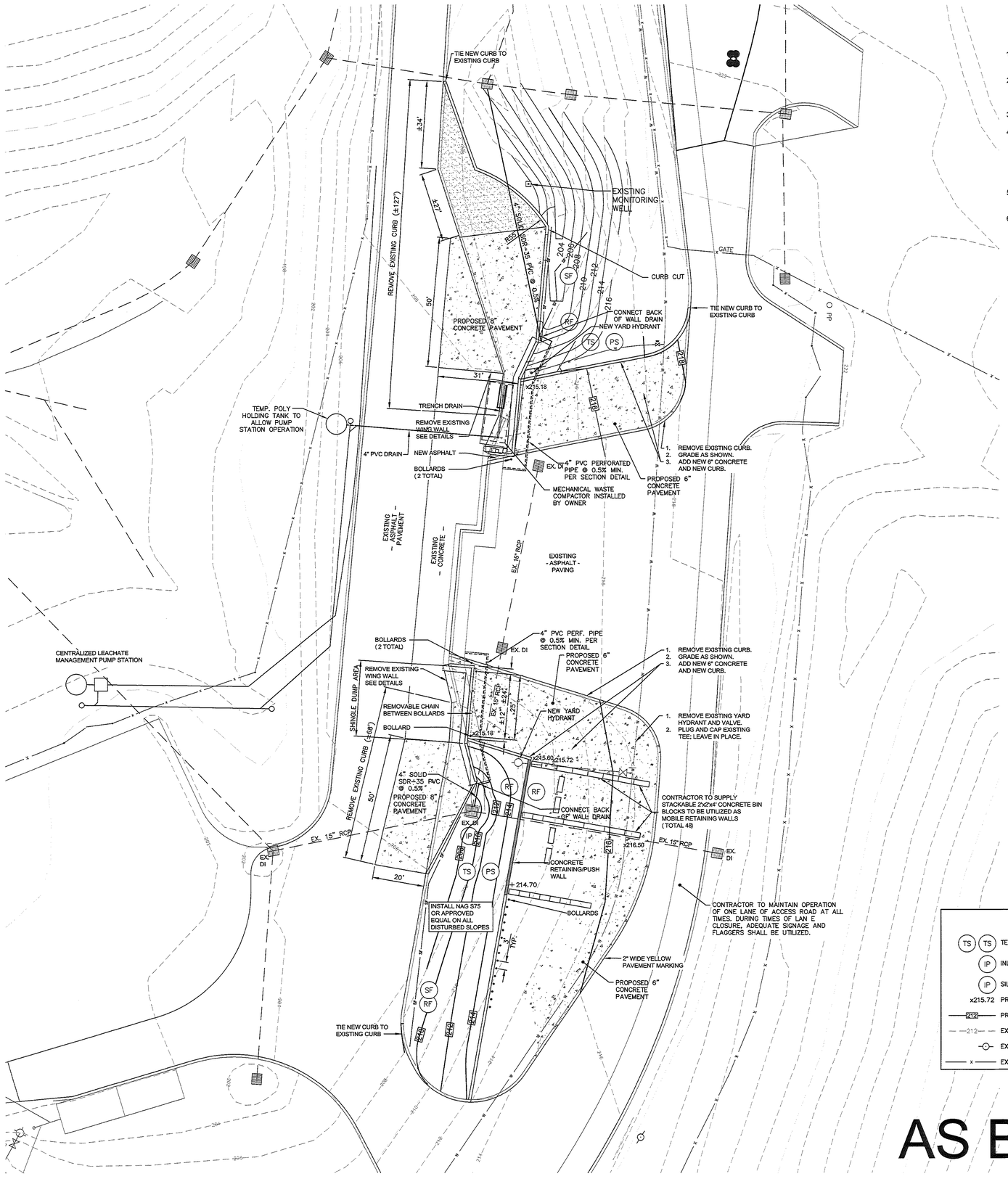
SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1000 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000-5,000 LB/ACRE GRAIN STRAW. ANCHOR BY TACKING WITH ASPHALT. ON SLOPE 3:1 OR STEEPER ANCHOR STRAW WITH NETTING.

MAINTENANCE
REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS FULLY ADEQUATE. MAY BE MOWED ONCE OR TWICE A YEAR, BUT MOWING IS NOT NECESSARY. REFERTILIZE, RESEED AND MULCH DAMAGED AREAS IMMEDIATELY.

SPECIFICATIONS

1. PLOW COMPACTED AREAS 6 INCHES DEEP.
2. APPLY TOPSOIL IF AVAILABLE.
3. APPLY LIME AND FERTILIZER UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL. IF A HYDRAULIC SEEDER IS USED, DO NOT MIX SEED AND FERTILIZER MORE THAN 30 MINUTES BEFORE APPLICATION.
4. UNLESS HYDROSEEDING IS USED, BREAK UP LARGE CLODS. IF SURFACE IS SEALED, LOOSEN IT IMMEDIATELY BEFORE SEEDING BY RAKING, DISKING, HARROWING OR OTHER SUITABLE METHODS. GROOVE OR FURROW SLOPES STEEPER THAN 3:1 ON THE CONTOUR BEFORE SEEDING.
5. EVENLY APPLY SEED USING A CYCLONE SEEDER (BROADCAST), DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. SMALL GRAINS SHOULD BE PLANTED NO MORE THAN ONE INCH DEEP, GRASSES AND LEGUMES NO MORE THAN 1/2 INCH.
6. BROADCAST SEED MUST BE COVERED BY RAKING OR CHAIN DRAGGING AND THEN LIGHTLY FIRMED WITH A ROLLER OR CULTIPAKER. HYDROSEEDED MIXTURES SHOULD INCLUDE A WOOD FIBER (CELLULOSE) MULCH.
7. IN AREAS NOT HYDROSEEDED, MULCH WITH GRAIN STRAW. SEE SEEDING SCHEDULES.



General Notes

1. CONTRACTOR SHALL VISIT SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE EROSION AND SEDIMENT CONTROL AT ALL TIMES.
3. SUITABLE STRUCTURAL FILL IS AVAILABLE ON SITE.
4. WORK SHALL BE COMPLETED ON PHASE A PRIOR TO COMMENCING ON PHASE B. CONTRACTOR SHALL SUBMIT WRITTEN WORK AND TRAFFIC CONTROL PLAN TO OWNER AND ENGINEER PRIOR TO COMMENCING WORK.
5. EXISTING CONVENIENCE CENTER BAYS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
6. MINOR ADJUSTMENTS MAY BE NECESSARY IN ORDER TO MATCH FIELD CONDITIONS FOR LAYOUT AND GRADE. ALL NEW WORK SHALL DRAIN TO EXISTING INLETS. "BIRDBATHS" WILL BE CAUSE FOR REJECTION OF WORK.

LEGEND

(TS) (TS)	TEMPORARY AND PERMANENT SEEDING
(IP)	INLET PROTECTION
(IP)	SILT FENCE
x215.72	PROPOSED ELEVATION TOP OF PAVEMENT
212	PROPOSED CONTOUR
212	EXISTING CONTOUR
	EXISTING POWER POLE
x	EXISTING CHAIN LINK FENCE

AS BUILT

NORTH CAROLINA PROFESSIONAL SEAL 025999 C. TRUE CLAYTON, JR.
1-24-2014

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SITE PLAN
HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

REVISIONS

9/14/12 REVISED LABELS OF EXISTING WORK

10/4/13 AS BUILT

DESIGNED BY:	CTC Jr.
DRAWN BY:	AEB
CHECKED BY:	CTC Jr.
SCALE:	1" = 20'
DATE:	JANUARY 2012
PROJECT NUMBER:	R14150N-01G

2.1.1

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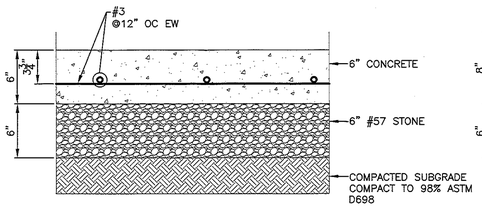
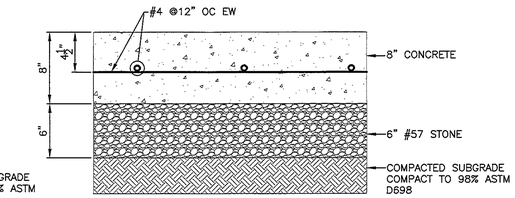


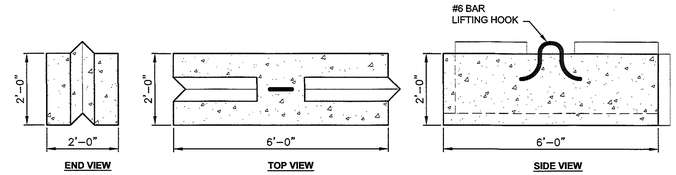
6" CONCRETE PAVEMENT

SCALE: 1-½" = 1'-0"



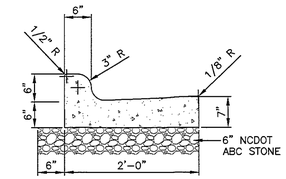
8" CONCRETE PAVEMENT

SCALE: 1-½" = 1'-0"



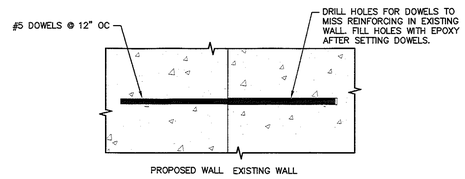
TYPICAL CONCRETE BIN BLOCK

SCALE: ½" = 1'-0"



STANDARD CURB AND GUTTER

NO SCALE

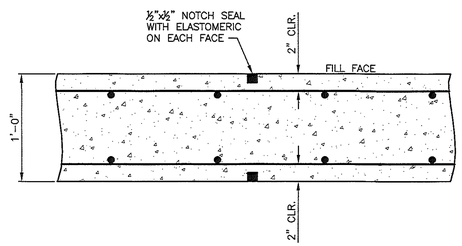


CONSTRUCTION JOINT DETAIL

SCALE: 1-½" = 1'-0"

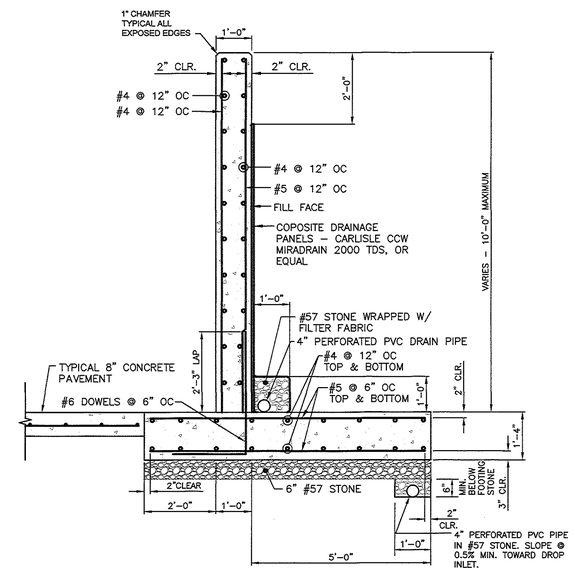
PLAN - RETAINING WALL EXPANSION JOINT

SCALE: 1-½" = 1'-0"



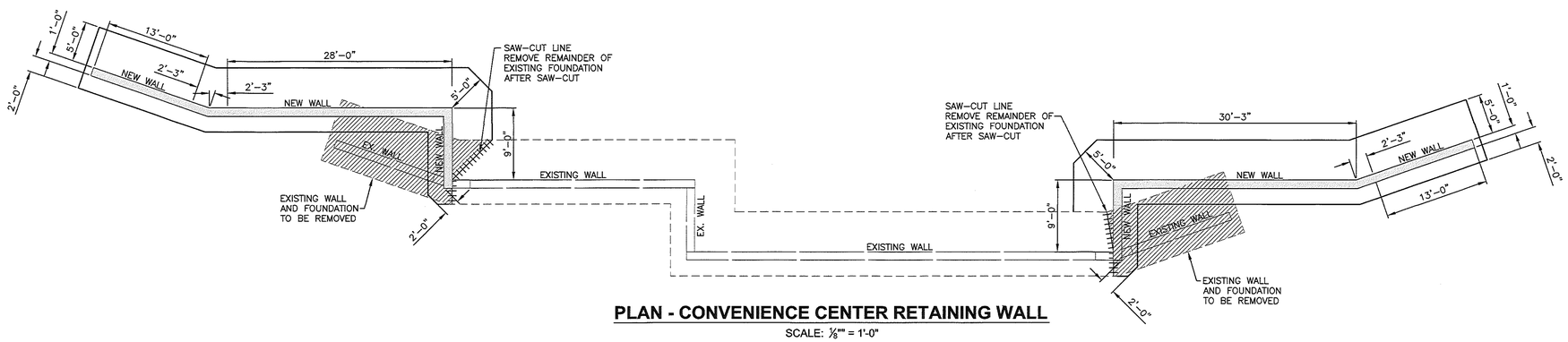
PLAN - RETAINING WALL CONTRACTION JOINT

SCALE: 1-½" = 1'-0"



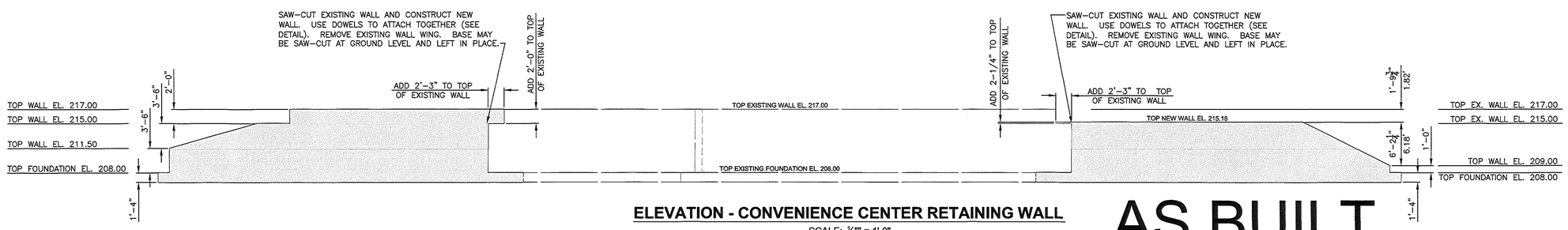
TYPICAL RETAINING WALL SECTION

SCALE: ½" = 1'-0"



PLAN - CONVENIENCE CENTER RETAINING WALL

SCALE: ⅛"" = 1'-0"



ELEVATION - CONVENIENCE CENTER RETAINING WALL

SCALE: ⅛"" = 1'-0"

AS BUILT

NORTH CAROLINA PROFESSIONAL SEAL 028909 ENGINEER C. TYRUS CLAYTON, JR.
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DETAILS
HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

REVISIONS

10/4/13 AS BUILT

DESIGNED BY:	CTC Jr.
DRAWN BY:	AEB
CHECKED BY:	CTC Jr.
SCALE:	AS NOTED
DATE:	JANUARY 2012
PROJECT NUMBER:	R14150N-01G

2.1.2

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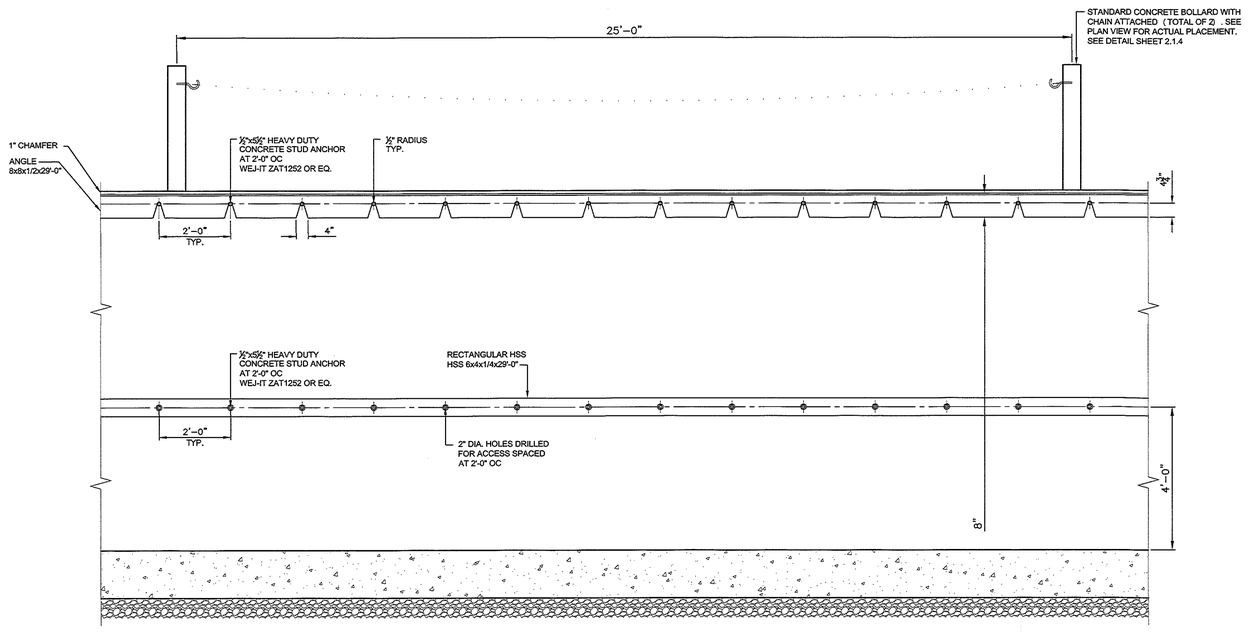
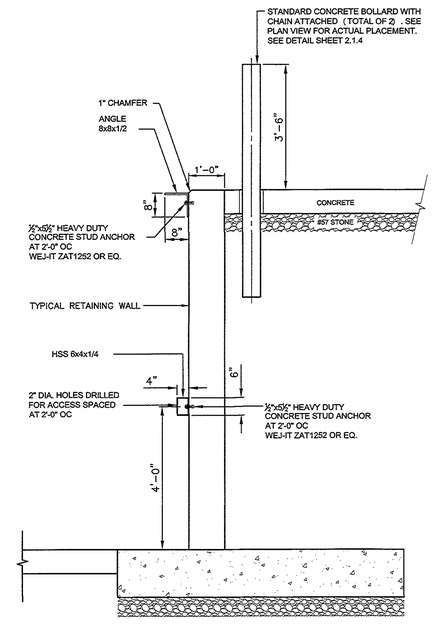


TYPICAL WALL ELEVATION AT SHINGLES DUMP AREA

SCALE: ½" = 1'-0"



TYPICAL WALL SECTION AT SHINGLES DUMP AREA

SCALE: ½" = 1'-0"

AS BUILT

NORTH CAROLINA PROFESSIONAL SEAL 026805 ENGINEER CYRUS CLAY JR.
1-24-2014

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DETAILS
HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

REVISIONS

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DESIGNED BY:	CTC Jr.
DRAWN BY:	AEB
CHECKED BY:	CTC Jr.
SCALE:	AS NOTED
DATE:	JANUARY 2012
PROJECT NUMBER:	R14150N-01G

2.1.3

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CONSTRUCTION SEQUENCE

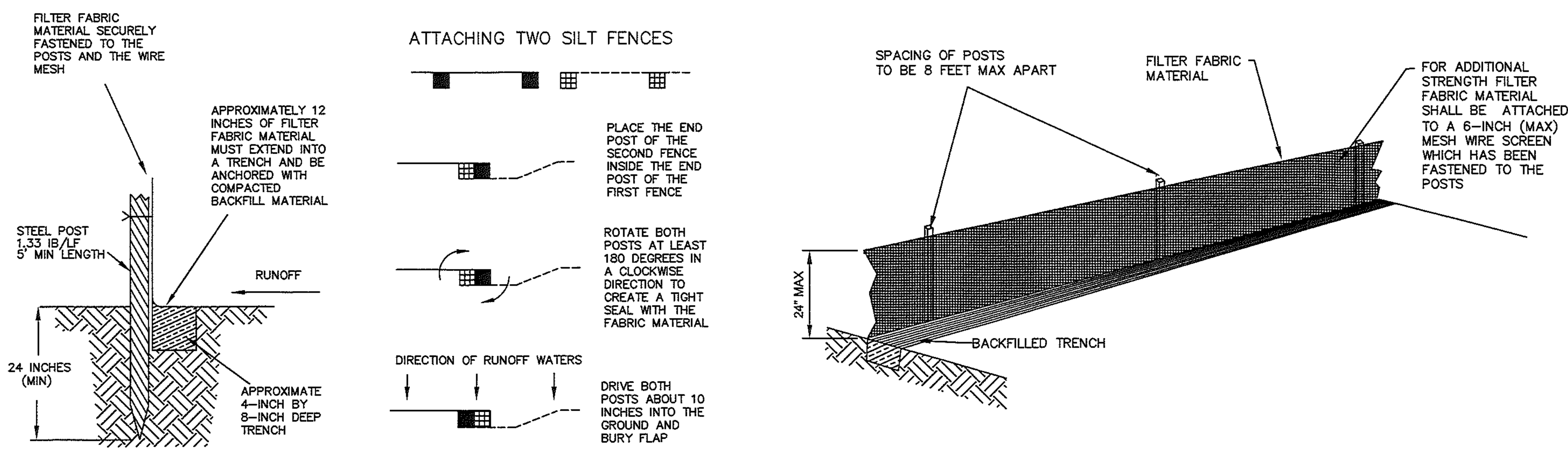
1. OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
2. HOLD PRECONSTRUCTION MEETING AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION.
3. INSTALL SEDIMENT FENCE AND CONSTRUCT TEMPORARY DIVERSIONS.
4. CLEAR VEGETATION FROM THE ENTIRE WORK AREA.
5. REMOVE TOPSOIL FROM AREA OF CONSTRUCTION AND BORROW AREA AND STOCKPILE IN AN AREA DESIGNATED BY THE ENGINEER.
6. COMPLETE GRADING AND INSTALL CULVERTS IF APPLICABLE.
7. DISTRIBUTE TOPSOIL AND PERMANENTLY VEGETATE AND MULCH.
8. AFTER THE SITE IS STABILIZED AND WHEN DIRECTED BY THE ENGINEER AND NCDENR, REMOVE ALL TEMPORARY MEASURES AND INSTALL PERMANENT VEGETATION.

EROSION & SEDIMENT CONTROL NOTES

1. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL STRUCTURES DURING CONSTRUCTION.
2. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
3. EROSION CONTROL MEASURES SHOWN ON APPROVED PLANS ARE SITE SPECIFIC AND ARE DESIGNED TO PREVENT SOIL EROSION AND TO PREVENT SEDIMENT FROM LEAVING THE SITE. HOWEVER, EROSION CONTROL DESIGN IS PERFORMANCE BASED. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY EITHER NCDENR OR THE ENGINEER.
4. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
5. CONTRACTOR STAGING AREA(S) SHALL BE RETURNED TO ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK.
6. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
7. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY CONTRACTOR ONCE STABILIZATION OR A SUFFICIENT GROUND COVER HAS BEEN ESTABLISHED OR AS DIRECTED BY THE ENGINEER. NCDENR'S FINAL APPROVAL IS REQUIRED.
8. ALL EXCESS EARTHWORK, CLASSIFIED AS SUITABLE FILL MATERIAL OR TOPSOIL, SHALL REMAIN AND BE STORED ONSITE AT A LOCATION DESIGNATED BY THE ENGINEER OR OWNER, UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR OWNER. THIS EXCESS SOIL SHALL BE STOCKPILED WITHIN THE APPROVED DISTURBANCE AREA AND ADEQUATELY PROTECTED FOR EROSION AND SEDIMENT CONTROL.

EROSION & SEDIMENT CONTROL MAINTENANCE REQUIREMENTS

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CHECKED FOR DAMAGE, STABILITY AND OPERATION FOLLOWING EVERY RAINFALL EVENT PRODUCING 1/2 INCH OR MORE OF RUNOFF AND AT LEAST ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED. MAINTENANCE SPECIFIED IN STRUCTURE CONSTRUCTION SPECIFICATIONS SHALL BE PERFORMED. RECORDS OF THESE INSPECTIONS ARE TO BE MAINTAINED AND MADE AVAILABLE FOR INSPECTION BY NCDENR, THE OWNER, AND ENGINEER ON SITE AT ALL TIMES.
2. DISTURBED AREAS LEFT INACTIVE BETWEEN PERIODS OF GRADING ACTIVITY SHALL BE TEMPORARILY SEEDED WITHIN 15 WORKING DAYS OR 30 CALENDAR DAYS, WHICHEVER IS SHORTER.
3. PERMANENT GROUND COVER VEGETATION SHALL BE SHALL BE APPLIED TO ALL AREAS WITH TEMPORARY VEGETATION AND ALL UNCOVERED DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS, WHICHEVER IS SHORTER, AFTER COMPLETION OF GRADING.
4. ALL SEEDED AREAS WHERE VEGETATION IS DAMAGED OR COVER IS NOT ADEQUATE SHALL BE PREPARED AND RESEEDED AS NECESSARY TO PRODUCE A VIGOROUS, DENSE VEGETATIVE COVER.



(SF) CONSTRUCTION OF A SILT FENCE

NOT TO SCALE

MATERIALS

1. USE A SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461, WHICH IS SHOWN IN PART IN TABLE 6.62B. SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120° F.
2. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.33 LB/LINEAR FT STEEL WITH A MINIMUM LENGTH OF 5 FEET. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.
3. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH SPACING OF 6 INCHES.

CONSTRUCTION

1. CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE. (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.)
3. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
4. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
5. WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BY DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.
6. EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
7. EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER (FIGURE 6.62A).
8. PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
9. BACKFILL THE TRENCH WITH COMPACTED SOIL PLACED OVER THE FILTER FABRIC. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
10. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

SEDIMENT FENCE INSTALLATION USING THE SLICING METHOD

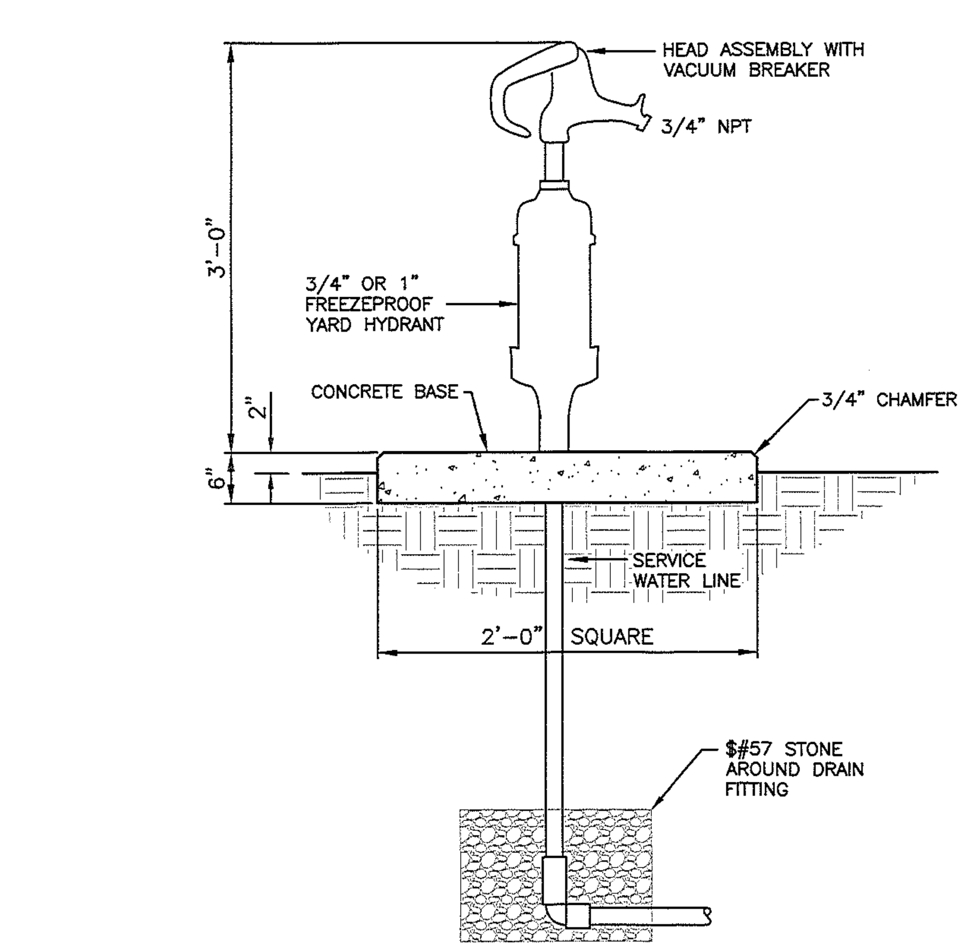
INSTEAD OF EXCAVATING A TRENCH, PLACING FABRIC AND THEN BACKFILLING TRENCH, SEDIMENT FENCE MAY BE INSTALLED USING SPECIALLY DESIGNED EQUIPMENT THAT INSERTS THE FABRIC INTO A CUT SLICED IN THE GROUND WITH A DISC.

INSTALLATION SPECIFICATIONS

1. THE BASE OF BOTH END POSTS SHOULD BE AT LEAST ONE FOOT HIGHER THAN THE MIDDLE OF THE FENCE. CHECK WITH A LEVEL IF NECESSARY.
2. INSTALL POSTS 4 FEET APART IN CRITICAL AREAS AND 6 FEET APART ON STANDARD APPLICATIONS.
3. INSTALL POSTS 2 FEET DEEP ON THE DOWNSTREAM SIDE OF THE SILT FENCE, AND AS CLOSE AS POSSIBLE TO THE FABRIC, ENABLING POSTS TO SUPPORT THE FABRIC FROM UPSTREAM WATER PRESSURE.
4. INSTALL POSTS WITH THE NIPPLES FACING AWAY FROM THE SILT FABRIC.
5. ATTACH THE FABRIC TO EACH POST WITH THREE TIES, ALL SPACED WITHIN THE TOP 8 INCHES OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1 INCH VERTICALLY APART. ALSO, EACH TIE SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
6. WRAP APPROXIMATELY 6 INCHES OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
7. NO MORE THAN 24 INCHES OF A 36 INCH FABRIC IS ALLOWED ABOVE GROUND LEVEL.
8. THE INSTALLATION SHOULD BE CHECKED AND CORRECTED FOR ANY DEVIATIONS BEFORE COMPACTION.
9. COMPACTION IS VITALLY IMPORTANT FOR EFFECTIVE RESULTS. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQUARE INCH. COMPACT THE UPSTREAM SIDE FIRST, AND THEN EACH SIDE TWICE FOR A TOTAL OF 4 TRIPS.

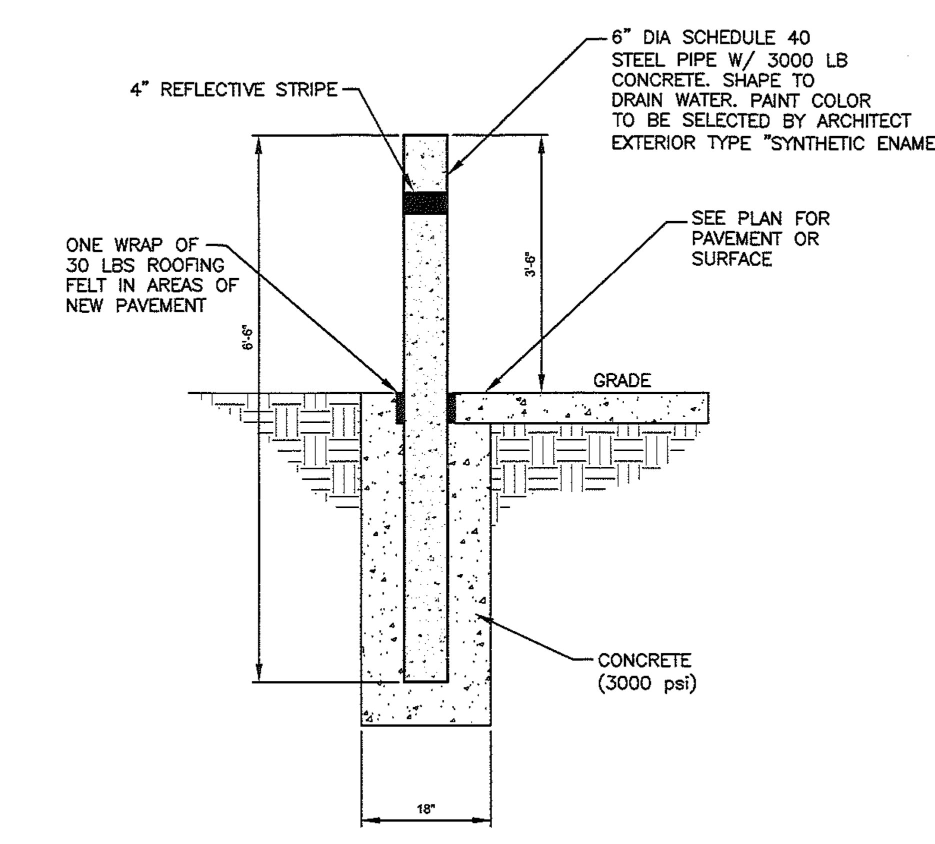
MAINTENANCE

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



YARD HYDRANT (3/4" AND 1")

NOT TO SCALE



NOTE: BOLLARDS SHALL BE INSTALLED PRIOR TO CONCRETE OR ASPHALT PAVEMENT PLACEMENT.

STANDARD CONCRETE BOLLARD

NOT TO SCALE

ROLLED EROSION CONTROL PRODUCTS

A. B. ROLLED EROSION CONTROL PRODUCTS (RECP)

1. GRADE THE SURFACE OF INSTALLATION AREAS SO THAT THE GROUND IS SMOOTH AND LOOSE. WHEN SEEDING PRIOR TO INSTALLATION, FOLLOW THE STEPS FOR SEED BED PREPARATION, SOIL AMENDMENTS AND SEEDING IN "SEEDING" ABOVE. ALL GULLIES, RILLS AND OTHER DISTURBED AREAS MUST BE FINE GRADED PRIOR TO INSTALLATION. SPREAD SEED BEFORE RECP INSTALLATION. IMPORTANT; REMOVE ALL LARGE ROCKS, DIRT CLODS, STUMPS, ROOTS, GRASS CLUMPS AND OTHER OBSTRUCTIONS FROM THE SOIL SURFACE TO ALLOW FOR DIRECT CONTACT BETWEEN THE SOIL SURFACE AND THE RECP.
2. TERMINAL ANCHOR TRENCHES ARE REQUIRED AT RECP ENDS AND INTERMITTENT TRENCHES MUST BE CONSTRUCTED ACROSS CHANNELS AT 25-FOOT INTERVALS. TERMINAL ANCHOR TRENCHES SHOULD BE A MINIMUM OF 12 INCHES IN DEPTH AND 6 INCHES IN WIDTH, WHILE INTERMITTENT TRENCHES NEED BE ONLY 6 INCHES DEEP AND 6 INCHES WIDE.

INSTALLATION IN CHANNELS

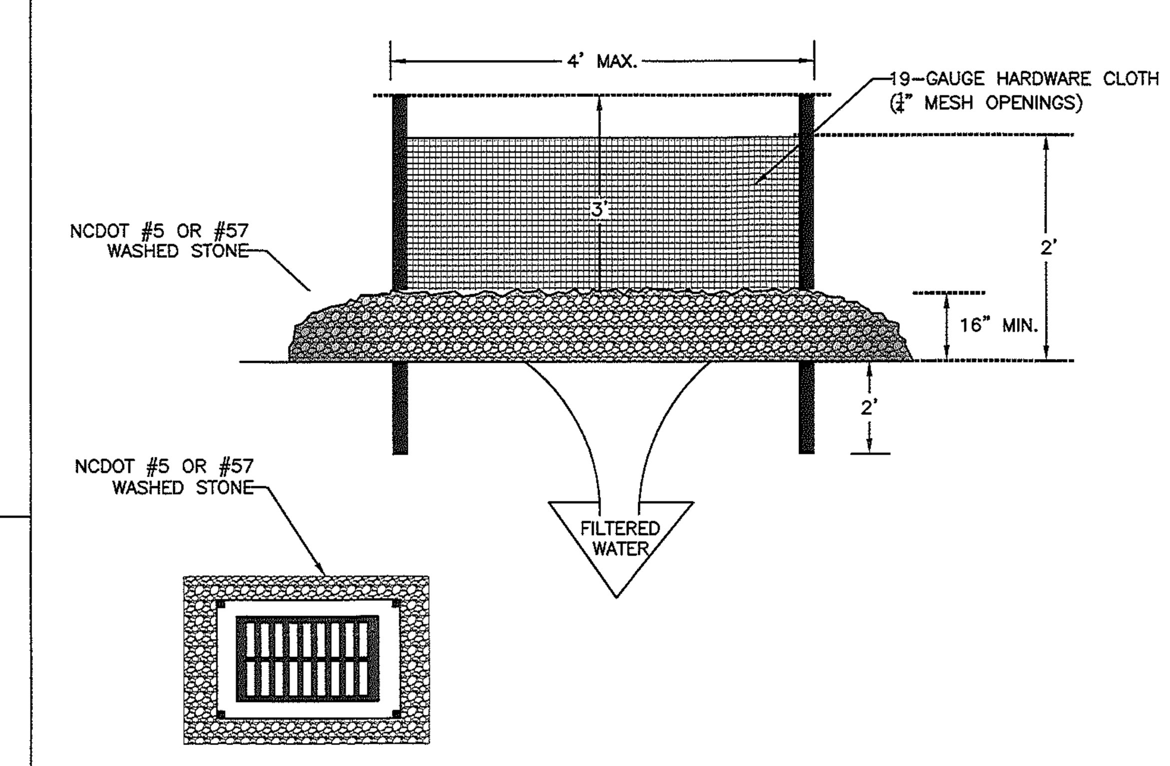
3. EXCAVATE TERMINAL TRENCHES ACROSS THE CHANNEL AT THE UPPER AND LOWER ENDS OF THE LINED CHANNEL SECTIONS. AT 25-FOOT INTERVALS ALONG THE CHANNEL, ANCHOR THE RECP ACROSS THE CHANNEL EITHER IN 6 INCH BY 6 INCH TRENCHES OR BY INSTALLING TWO CLOSELY SPACED ROWS OF ANCHORS. EXCAVATE LONGITUDINAL TRENCHES 6 INCHES DEEP AND WIDE ALONG CHANNEL EDGES (ABOVE WATER LINE) IN WHICH TO BURY THE OUTSIDE RECP EDGES. PLACE THE FIRST RECP AT THE DOWNSTREAM END OF THE CHANNEL. PLACE THE END OF THE FIRST RECP IN THE TERMINAL TRENCH AND PIN IT AT 1 FOOT INTERVALS ALONG THE BOTTOM OF THE TRENCH.
NOTE: THE RECP SHOULD BE PLACED UPSIDE DOWN IN THE TRENCH WITH THE ROLL ON THE DOWNSTREAM SIDE OF THE TRENCH.
ONCE PINNED AND BACKFILLED, THE RECP IS DEPLOYED BY WRAPPING OVER THE TOP OF THE TRENCH AND UNROLLING UPSTREAM. IF THE CHANNEL IS WIDER THAN THE PROVIDED ROLLS, PLACE ENDS OF ADJACENT ROLLS IN THE TERMINAL TRENCH, OVERLAPPING THE ADJACENT ROLLS A MINIMUM OF 3 INCHES. PIN AT 1 FOOT INTERVALS, BACKFILL AND COMPACT. UNROLL THE RECP IN THE UPSTREAM DIRECTION UNTIL REACHING THE FIRST INTERMITTENT TRENCH. FOLD THE RECP BACK OVER ITSELF, POSITIONING THE ROLL ON THE DOWNSTREAM SIDE OF THE TRENCH, AND ALLOW THE MAT TO CONFORM TO THE TRENCH.
THEN PIN THE RECP (TWO LAYERS) TO THE BOTTOM OF THE TRENCH, BACKFILL AND COMPACT. CONTINUE UP THE CHANNEL (WRAPPING OVER THE TOP OF THE INTERMITTENT TRENCH) REPEATING THIS STEP AT OTHER INTERMITTENT TRENCHES, UNTIL REACHING THE UPPER TERMINAL TRENCH.
AT THE UPPER TERMINAL TRENCH, ALLOW THE RECP TO CONFORM TO THE TRENCH, SECURE WITH PINS OR STAPLES, BACKFILL, COMPACT AND THEN BRING THE MAT BACK OVER THE TOP OF THE TRENCH AND ONTO THE EXISTING MAT (2 TO 3 FEET OVERLAP IN THE DOWNSTREAM DIRECTION), AND PIN AT 1 FOOT INTERVALS ACROSS THE RECP. WHEN STARTING INSTALLATION OF A NEW ROLL, BEGIN IN A TRENCH OR SINGLE-LAP ENDS OF ROLLS A MINIMUM OF 1 FOOT WITH UPSTREAM RECP ON TOP TO PREVENT UPLIFTING. PLACE THE OUTSIDE EDGES OF THE RECP(S) IN LONGITUDINAL TRENCHES, PIN, BACKFILL, AND COMPACT.

ANCHORING DEVICES

4. 11 GAUGE, AT LEAST 6 INCHES LENGTH BY 1 INCH WIDTH STAPLES OR 12 INCH MINIMUM LENGTH WOODEN STAKES ARE RECOMMENDED FOR ANCHORING THE RECP TO THE GROUND.
DRIVE STAPLES OR PINS SO THAT THE TOP OF THE STAPLE OR PIN IS FLUSH WITH THE GROUND SURFACE. ANCHOR EACH RECP EVERY 3 FEET ALONG ITS CENTER. LONGITUDINAL OVERLAPS MUST BE SUFFICIENT TO ACCOMMODATE A ROW OF ANCHORS AND UNIFORM ALONG THE ENTIRE LENGTH OF OVERLAP AND ANCHORED EVERY 3 FEET ALONG THE OVERLAP LENGTH. ROLL ENDS MAY BE SPLICED BY OVERLAPPING 1 FOOT (IN THE DIRECTION OF WATER FLOW), WITH THE UPSTREAM/USLOPE MAT PLACED ON TOP OF THE DOWNSTREAM/ DOWNSLOPE RECP. THIS OVERLAP SHOULD BE ANCHORED AT 1 FOOT SPACING ACROSS THE RECP. WHEN INSTALLING MULTIPLE WIDTH MATS HEAT SEAMED IN THE FACTORY, ALL FACTORY SEAM AND FIELD OVERLAPS SHOULD BE SIMILARLY ANCHORED.

MAINTENANCE

1. INSPECT ROLLED EROSION CONTROL PRODUCTS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. REPAIR IMMEDIATELY.
2. GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECP. ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
3. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
4. MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.



CONSTRUCTION SPECIFICATIONS

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NC DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUNDCOVER.

MAINTENANCE

INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (½" OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING THE SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

(IP) HARDWARE CLOTH AND GRAVEL INLET PROTECTION

NOT TO SCALE

AS BUILT

NORTH CAROLINA PROFESSIONAL SEAL 028909 ENGINEER C. TYRUS CLAYTON, JR.
1-24-2014

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FIRM # C-0861

DETAILS
HARNETT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

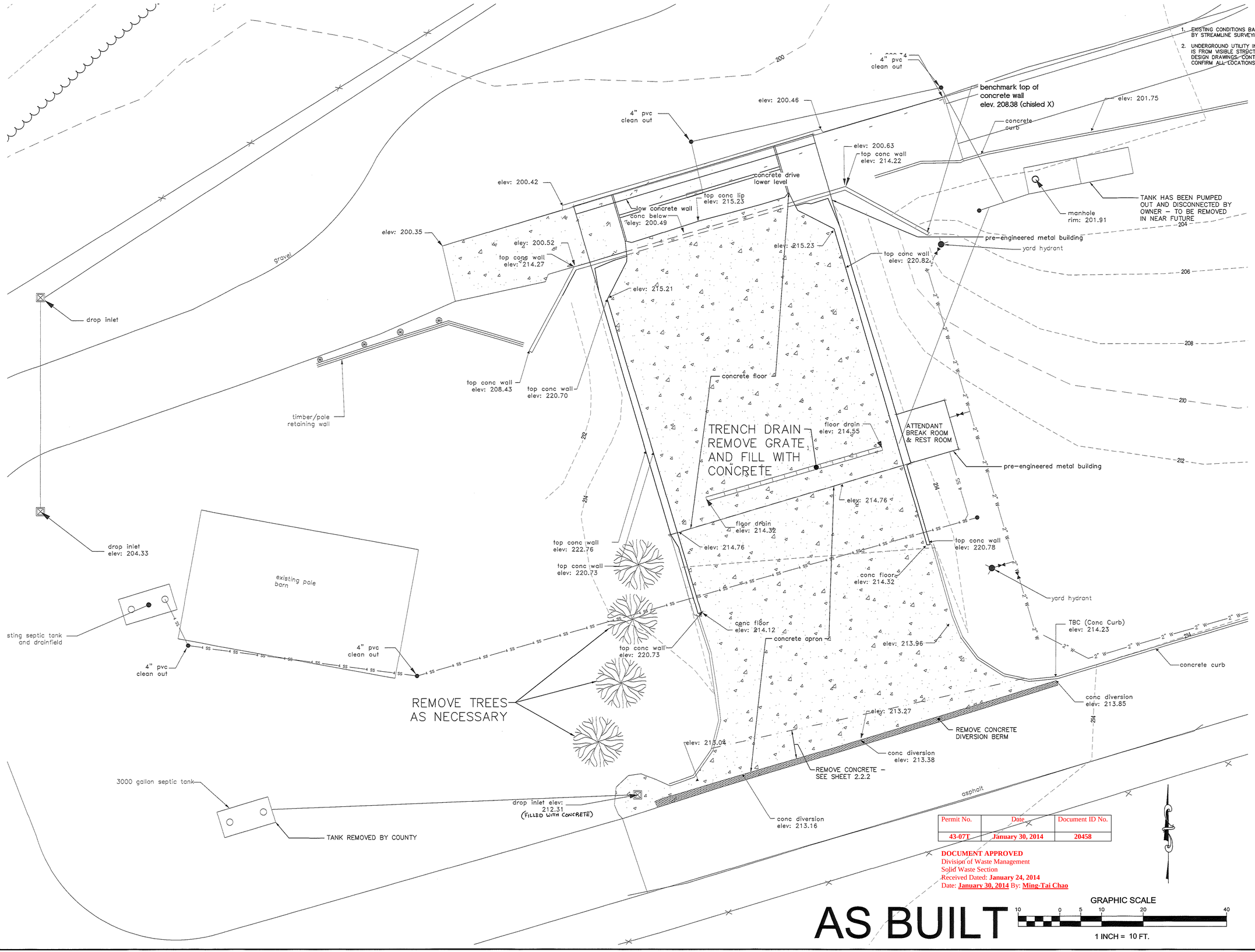
REVISIONS

10/4/13 AS BUILT

DESIGNED BY:	CTC Jr.
DRAWN BY:	AEB
CHECKED BY:	CTC Jr.
SCALE:	NO SCALE
DATE:	JANUARY 2012
PROJECT NUMBER:	R14150N-01G

2.1.4

1. EXISTING CONDITIONS BASED UPON SURVEY BY STREAMLINE SURVEYING ON JULY 2011.
2. UNDERGROUND UTILITY INFORMATION SHOWN IS FROM VISIBLE STRUCTURES AND OTHER DESIGN DRAWINGS. CONTRACTOR SHALL CONFIRM ALL LOCATIONS.



Permit No.	Date	Document ID No.
43-07T	January 30, 2014	20458

DOCUMENT APPROVED
Division of Waste Management
Solid Waste Section
Received Dated: **January 24, 2014**
Date: **January 30, 2014** By: **Ming-Tai Chao**

AS BUILT

GRAPHIC SCALE
10 0 5 10 20 40
1 INCH = 10 FT.

NORTH CAROLINA PROFESSIONAL SEAL 026909 ENGINEER C. TYRUS CLAYTON, JR.
1-24-2014

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FIRM # C-0861

EXISTING CONDITIONS AND DEMOLITION PLAN
HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

REVISIONS
10/4/13 AS BUILT

DESIGNED BY:	CTC Jr.
DRAWN BY:	SBK
CHECKED BY:	CTC Jr.
SCALE:	1" = 10'
DATE:	9/21/12
PROJECT NUMBER:	R14150N-01G

2.2.1

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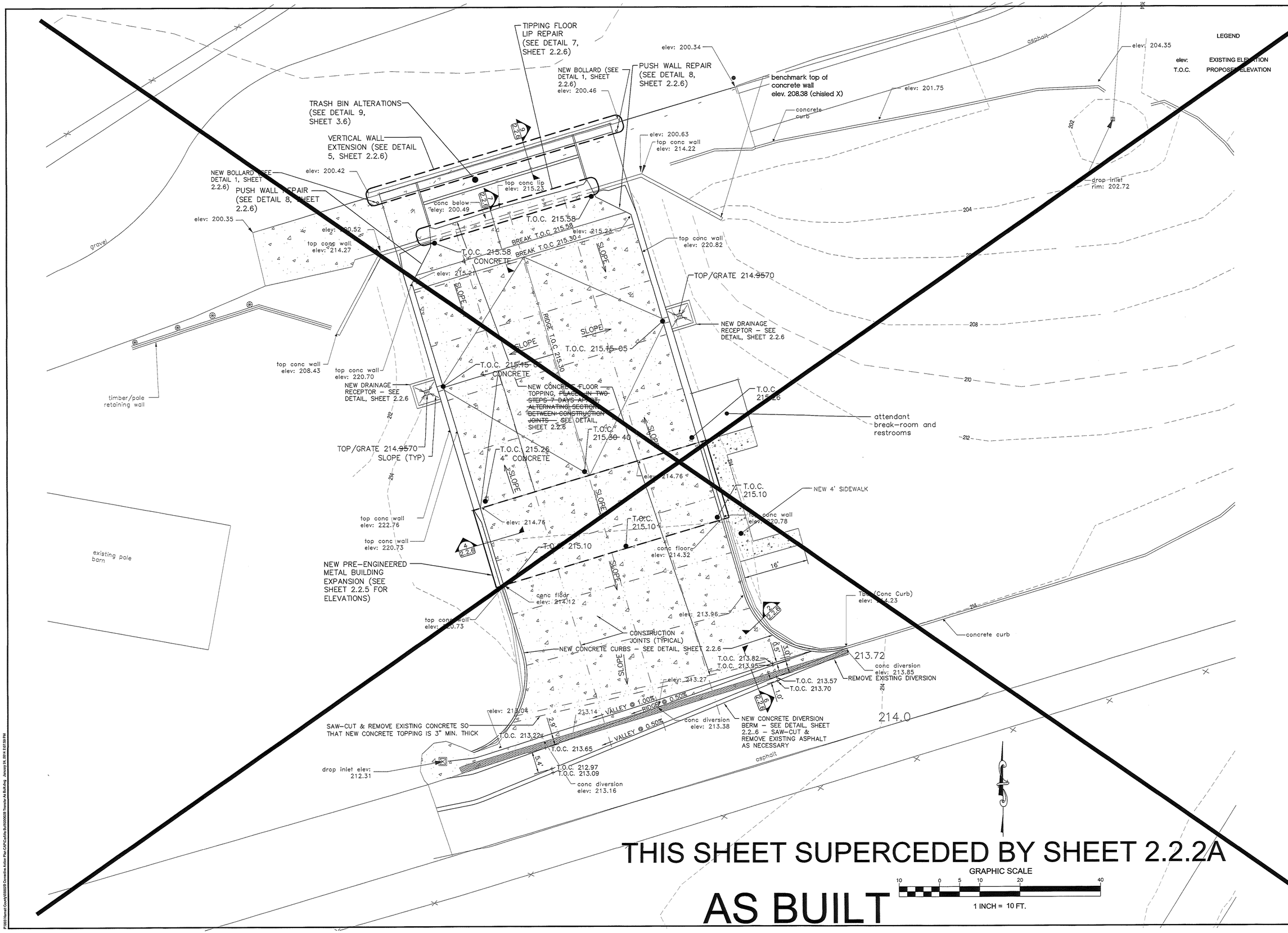

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FIRM # C-0861

NEW FLOOR GRADING
HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

REVISIONS

10/4/13 AS BUILT

DESIGNED BY:	CTC Jr.
DRAWN BY:	SBK
CHECKED BY:	CTC Jr.
SCALE:	1" = 10'
DATE:	-
PROJECT NUMBER:	R14150N-01G

2.2.2

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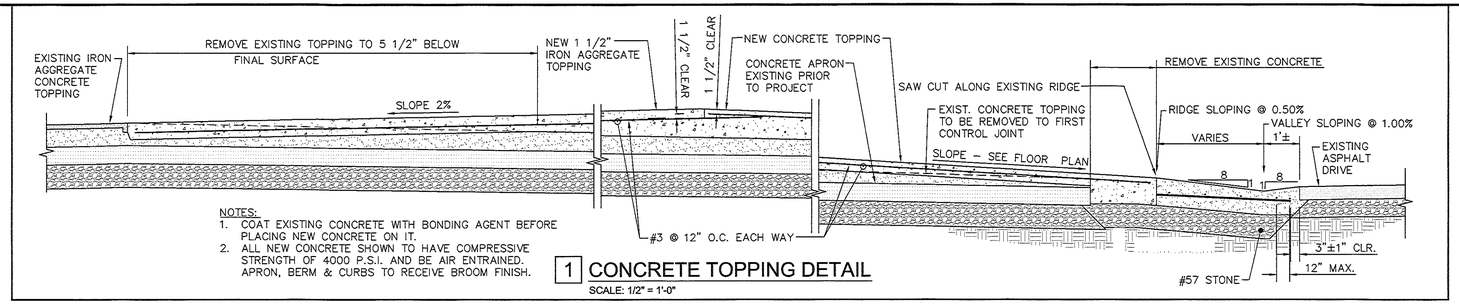


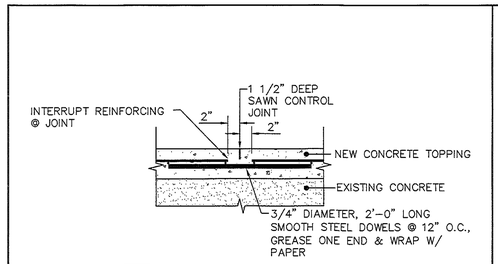
NOTES:
1. COAT EXISTING CONCRETE WITH BONDING AGENT BEFORE PLACING NEW CONCRETE ON IT.
2. ALL NEW CONCRETE SHOWN TO HAVE COMPRESSIVE STRENGTH OF 4000 P.S.I. AND BE AIR ENTRAINED. APRON, BERM & CURBS TO RECEIVE BROOM FINISH.

1 CONCRETE TOPPING DETAIL

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

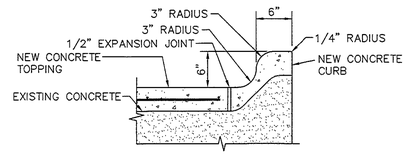
LEGEND

elev:	EXISTING ELEVATION
T.O.C.	PROPOSED ELEVATION



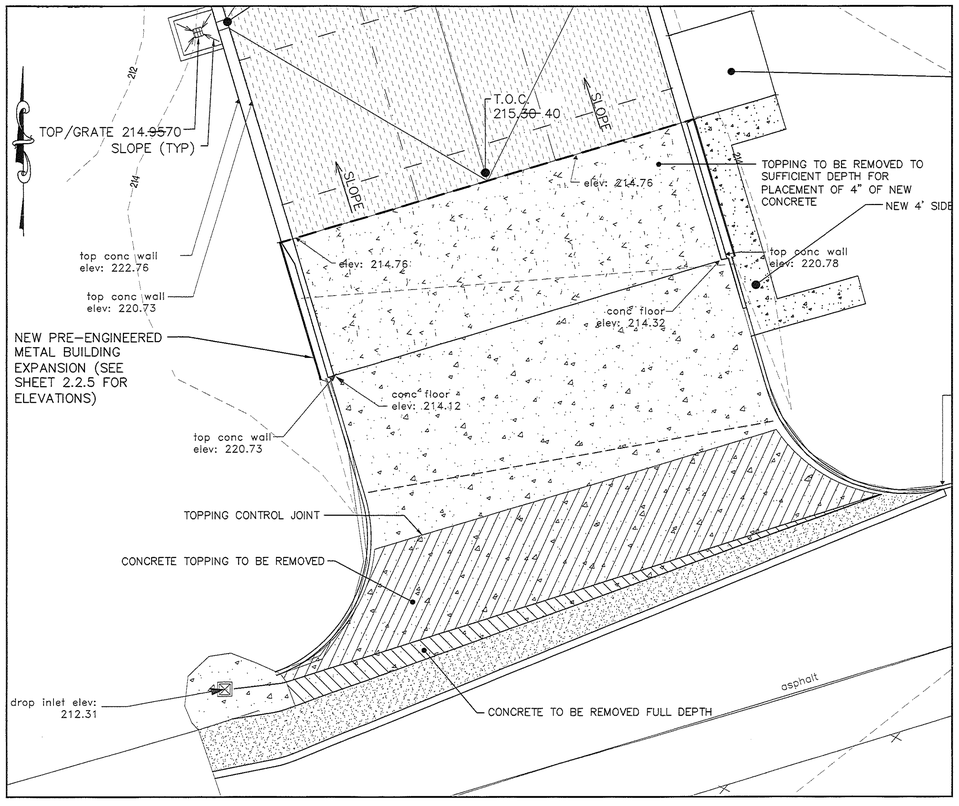
2 SLAB CONTROL JOINT DETAIL

SCALE: 1" = 1'-0"



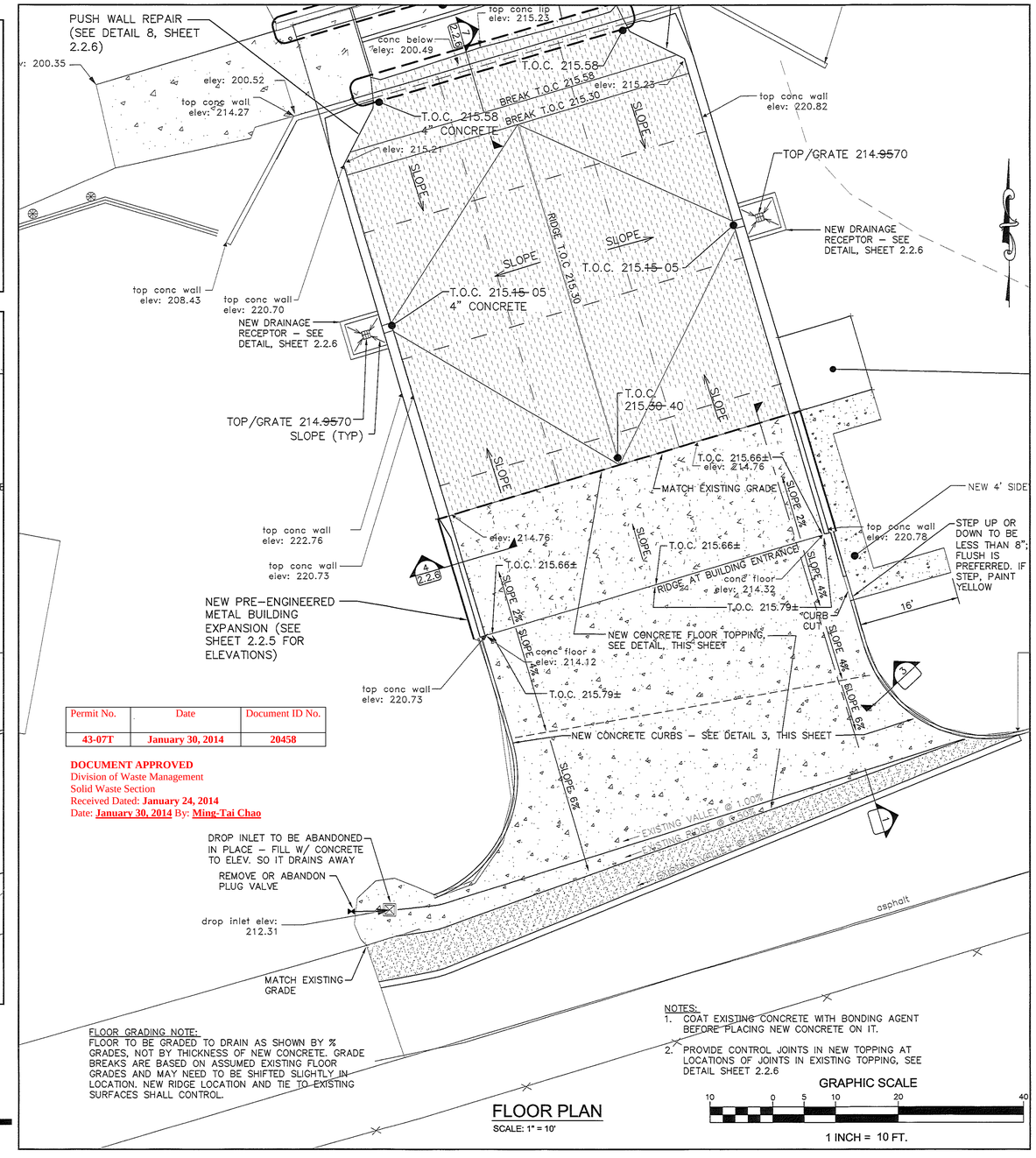
3 CURB DETAIL

SCALE: 1" = 1'-0"



FLOOR DEMOLITION PLAN

SCALE: 1" = 10'



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43-07T	January 30, 2014	20458

DOCUMENT APPROVED
Division of Waste Management
Solid Waste Section
Received Dated: **January 24, 2014**
Date: **January 30, 2014** By: **Ming-Tai Chao**

FLOOR GRADING NOTE:
FLOOR TO BE GRADED TO DRAIN AS SHOWN BY % GRADES, NOT BY THICKNESS OF NEW CONCRETE. GRADE BREAKS ARE BASED ON ASSUMED EXISTING FLOOR GRADES AND MAY NEED TO BE SHIFTED SLIGHTLY IN LOCATION. NEW RIDGE LOCATION AND TIE TO EXISTING SURFACES SHALL CONTROL.

NOTES:
1. COAT EXISTING CONCRETE WITH BONDING AGENT BEFORE PLACING NEW CONCRETE ON IT.
2. PROVIDE CONTROL JOINTS IN NEW TOPPING AT LOCATIONS OF JOINTS IN EXISTING TOPPING, SEE DETAIL SHEET 2.2.6

FLOOR PLAN

SCALE: 1" = 10'

GRAPHIC SCALE
10 0 5 10 20 40
1 INCH = 10 FT.

AS BUILT

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FIRM # C-0591

BULLETIN #15
HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

REVISIONS
12//24/13 AS BUILT

DESIGNED BY:	CTC Jr.
DRAWN BY:	SBK
CHECKED BY:	CTC Jr.
SCALE:	AS NOTED
DATE:	10/11/13
PROJECT NUMBER:	R14150N-01G

2.2.2A

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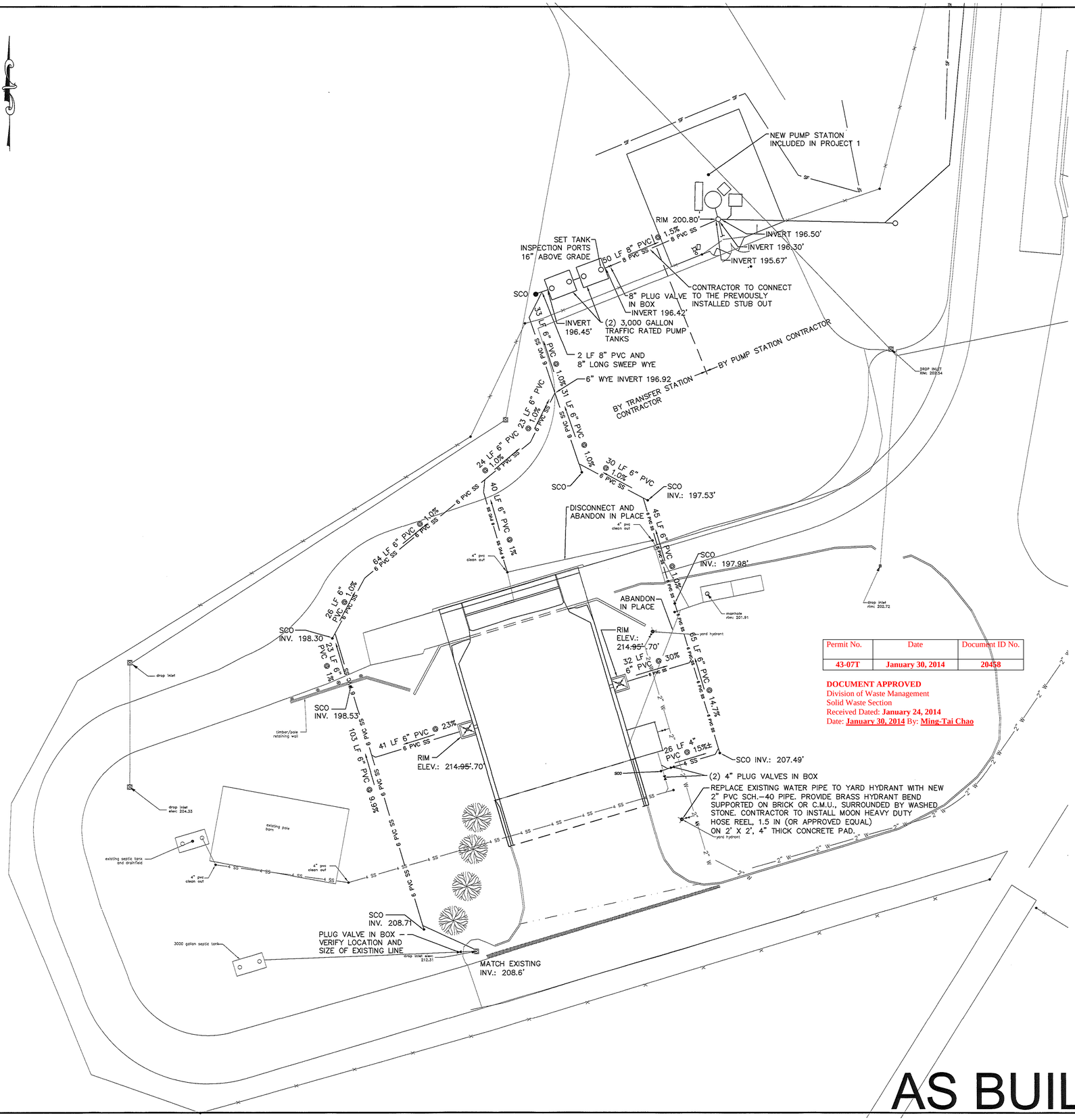
UTILITY NOTES:

1. PRIOR TO BIDDING ON WORK AT THE SITE, THE CONTRACTOR SHALL VISIT THE SITE TO FIELD VERIFY THE EXISTING CONDITIONS.
2. NO WORK SHALL TAKE PLACE ON THE SITE UNTIL THE CONTRACTOR HAS CONTACTED NORTH CAROLINA ONE-CALL CENTER TO LOCATE ALL EXISTING UNDERGROUND UTILITIES.
3. ANY SIGNIFICANT CHANGES IN THE ACTUAL SITE CONDITIONS FROM THOSE SHOWN ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. ALL EXISTING WALKS, PAVEMENT, CURB, ETC. WHICH ARE DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED TO MATCH EXISTING CONDITIONS.
5. ALL EXISTING FENCING, PAVEMENT, UTILITIES, ETC. THAT ARE REMOVED BY THE CONTRACTOR SHALL BE DISPOSED OF PROPERLY.
6. ALL WATER AND SANITARY SEWER WORK SHALL CONFORM TO THE HARNETT COUNTY STANDARDS.
7. ADJUST ALL EXISTING AND NEW UTILITIES TO BE FLUSH WITH FINISHED GRADE PER APPLICAPLE DETAILS SHOWN UNLESS OTHERWISE SPECIFIED.
8. ALL EXTERNAL VALVES ARE TO BE SUPPLIED WITH A STEM OPERATING NUT. ONE GATE VALVE OPERATING WRENCH OF SUFFICIENT LENGTH TO OPERATE ALL INSTALLED VALVES SHALL BE SUPPLIED TO THE OWNER PRIOR TO FINAL COMPLETION.
9. ALL EXTERNAL VALVES ARE TO BE INSTALLED IN A VALVE BOX.
10. ALL SANITARY SEWER AND STORM SEWER CLEANOUTS ARE TO BE CONSTRUCTED PER THE DETAIL. THE TOP COVER OF THE CAST IRON VALVE BOX SHALL BE PAINTED WITH 2 COATS, GLOSS, AS FOLLOWS:
    i. SANITARY SEWER: GREEN
    ii. STORM SEWER: BLACK OR NATURAL



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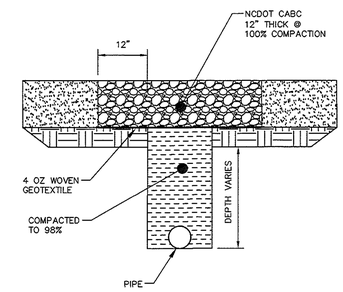
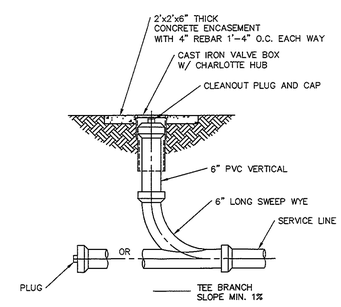
Division of Waste Management
Solid Waste Section
Received Dated: **January 24, 2014**
Date: **January 30, 2014** By: **Ming-Tai Chao**



GRAVEL PAVEMENT REPAIR DETAIL



NOTE: THE TOP COVER OF THE CAST IRON VALVE BOX SHALL BE PAINTED WITH 2 COATS, GLOSS, AS FOLLOWS:

SANITARY SEWER: GREEN
STORM SEWER: BLACK OR NATURAL

SEWER SERVICE CLEANOUT

AS BUILT

GRAPHIC SCALE
20 0 10 20 40 80
1 INCH = 20 FT.

NORTH CAROLINA PROFESSIONAL SEAL 028606 ENGINEER C. TITUS CLAYTON, JR.
1-24-2014

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FIRM # C-0561

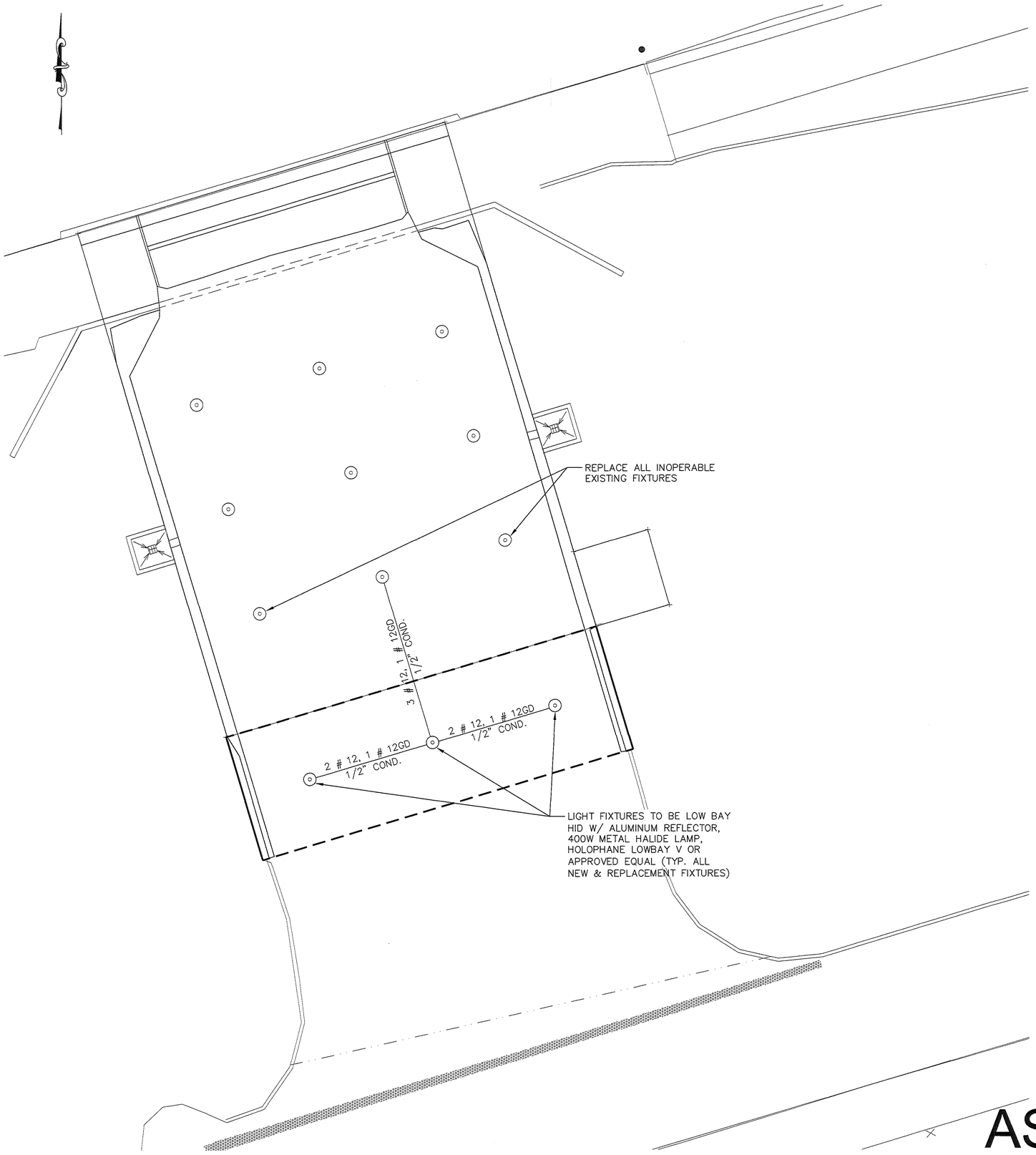
UTILITY PLAN
HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

REVISIONS
10/4/13 AS BUILT

DESIGNED BY:	CTC Jr.
DRAWN BY:	SBK
CHECKED BY:	CTC Jr.
SCALE:	1" = 20'
DATE:	-
PROJECT NUMBER:	R14150N-01G

2.2.3

20483\Harnett County\R20483\Generalized Base Plan\GP\Sub\As Built\R20483 Transfer As Built.dwg January 24, 2014 4:21:35 PM



ELECTRICAL NOTES (GENERAL)

1. THE ELECTRICAL INSTALLATION, EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL, AS A MINIMUM, BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC), OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), ALL FEDERAL, STATE, COUNTY, AND LOCAL CODES, LAWS, AND ORDINANCES, AND RULINGS OF THE INSPECTION AUTHORITIES HAVING JURISDICTION. ALL FEES, PERMITS, ETC., ASSOCIATED WITH THE ELECTRICAL WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
2. THE DRAWINGS GENERALLY INDICATE THE WORK TO BE INSTALLED, BUT DO NOT SHOW ALL BENDS, BOXES, FITTINGS, AND SPECIALTIES WHICH MAY BE REQUIRED FOR A COMPLETE INSTALLATION. ALL SUCH ITEMS REQUIRED TO COMPLETE THE INSTALLATION ACCORDING TO INDUSTRY ACCEPTED PRACTICES SHALL BE INCLUDED IN THE BID.
3. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND LISTED AND LABELED BY UNDERWRITER LABORATORIES, INC.
4. THE CONTRACTOR SHALL VERIFY WIRE AND FUSE/CIRCUIT BREAKER SIZING FOR ALL MECHANICAL EQUIPMENT PRIOR TO PURCHASING MATERIALS AND INSTALLING BRANCH CIRCUITS.
5. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES TO AVOID INTERFERENCES AND CONFLICTS. APPARENT INTERFERENCES OR CONFLICTS SHALL BE REPORTED TO THE PRIME CONTRACTOR AND ENGINEER, AND RESOLVED PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
6. THE ELECTRICAL CONTRACTOR SHALL CONNECT BRANCH CIRCUITS TO THE MAIN LINE TERMINALS OF EQUIPMENT FURNISHED BY OTHER CONTRACTORS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY NECESSARY SWITCHES, DISCONNECTS, OR OVERCURRENT PROTECTION AHEAD OF SUCH EQUIPMENT.
7. RACEWAYS ARE SHOWN SCHEMATICALLY AND MAY BE REROUTED IN THE FIELD. THEY SHALL BE INSTALLED AT RIGHT ANGLES TO OR PARALLEL WITH BUILDING LINES. THEY SHALL BE RUN CONCEALED WITHIN WALLS OR BUILDING STRUCTURES WHEREVER POSSIBLE.
8. THE MINIMUM ALLOWABLE SIZE FOR ANY CONDUIT, IMC, OR EMT SHALL BE 1/2" AND MAY BE USED FOR 2 #12 WIRE SWITCHLEGS ONLY. A SWITCHLEG SHALL BE DEFINED AS THE RUN OF CONDUIT FROM THE SWITCH OUTLET BOX TO THE FIRST OUTLET BEING SWITCHED.
9. FULL WEIGHT GALVANIZED RIGID STEEL CONDUIT SHALL BE USED IN THE FOLLOWING AREAS:
   A. ON THE EXTERIOR OF THE BUILDING OR ROOF,
   B. VERTICAL DROPS WHERE THE CONDUIT CANNOT BE ANCHORED TO WALLS OR OTHER SUPPORT
   C. WHERE SUBJECT TO MECHANICAL DAMAGE
   D. ANY AREA EXPOSED TO AMBIENT MOISTURE CONDITIONS (I.E. SHELTERS, PORCHES, ETC.)
10. ALL WIRE AND CABLE SHALL BE COPPER AND HAVE 600 VOLT THHN-THWN INSULATION. ALUMINUM WIRING SHALL NOT BE PERMITTED.
11. THE MINIMUM WIRE SIZE SHALL BE #12 AWG EXCEPT FOR CONTROL WIRING, WHICH MAY BE #14 AWG. CONTROL WIRING SHALL USE STRANDED CONDUCTORS UNLESS OTHERWISE NOTED.
12. ALL METAL RACEWAY SYSTEMS SHALL BE MADE ELECTRICALLY CONTINUOUS. THE RACEWAY SYSTEM SHALL NOT BE THE SOLE GROUNDING METHOD. AN INSULATED COPPER CONDUCTOR SHALL BE INSTALLED FOR ALL FEEDERS AND BRANCH CIRCUITS. AT RECEPTACLES, A GREEN GROUND CONDUCTOR SHALL BE CONNECTED TO THE GROUND TERMINAL OF THE RECEPTACLE.
13. 3/4" CONDUIT IS MINIMUM ALLOWABLE SIZE EXCEPT AS INDICATED IN NOTE #10 ABOVE. CONDUIT FILL NOT TO EXCEED 40% AS PERMITTED BY THE NEC.
14. ALL CONDUCTORS TO BE INSTALLED IN CONDUIT. EMT FITTINGS TO BE COMPRESSION TYPE, INSULATED THROAT.
15. #10 AWG CONDUCTORS SHALL BE USED FOR 20 AMP BRANCH CIRCUIT HOME RUNS EXCEEDING 50 FT. TO THE JUNCTION POINT. 20 AMP BRANCH CIRCUIT WIRING SHALL BE #10 AWG THROUGHOUT IF THE CIRCUIT IS LONGER THAN 100 FEET TOTAL LENGTH.
16. CONDUCTORS SHALL BE CONTINUOUS FORM OUTLET TO OUTLET (OR FIXTURE TO FIXTURE). SPLICES WILL NOT BE MADE EXCEPT WITHIN ACCESSIBLE OUTLET OR JUNCTION BOXES, TROUGHS, OR GUTTERS.
17. MAKE CONDUCTOR LENGTHS FOR PARALLEL CIRCUITS EQUAL.
18. ALL CONDUIT WITHOUT CONDUCTORS SHALL HAVE NYLON PULL CORDS INSTALLED.
19. THE CONTRACTOR SHALL MAKE COMPLETE REVIEW OF THE PLANS, SCHEDULES, AND DETAILS, PRIOR TO INSTALLATION, AND REVIEW ANY CONFLICTS THAT ARE NOTED WITH THE ENGINEER.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES FOR PERMITS INSPECTIONS. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR ELECTRIC UTILITY CONNECTION FEES AND LINE EXTENSION FEES.
21. ALL WIRE TERMINATIONS AND EQUIPMENT TO BE RATED FOR 75° C MINIMUM.
22. ALL ITEMS ARE TO BE SURFACE MOUNTED WITH EXPOSED CONDUITS.

AS BUILT

GRAPHIC SCALE

8 0 4 8 16 32

1 INCH = 8 FT.

NORTH CAROLINA PROFESSIONAL SEAL 025803 ENGINEER C. TITUS CLAYTON, JR.

1-24-2014

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FIRM # C-0861

ELECTRICAL PLAN
HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

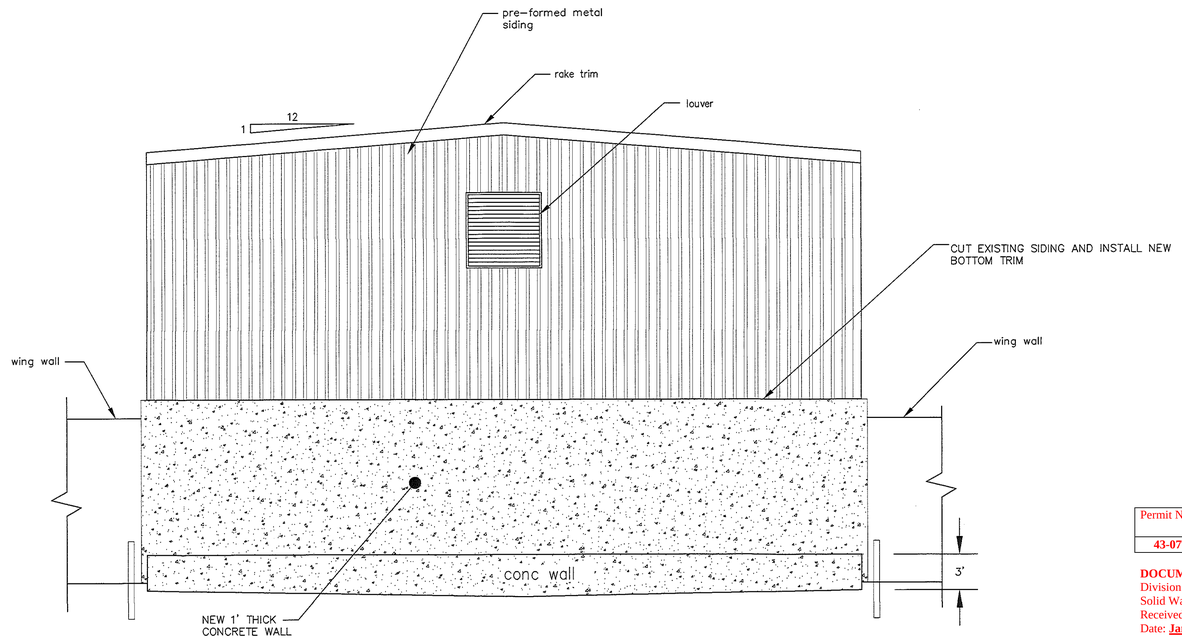
REVISIONS

10/4/13 AS BUILT

DESIGNED BY:	CTC Jr.
DRAWN BY:	SBK
CHECKED BY:	CTC Jr.
SCALE:	1/8" = 1'-0"
DATE:	-
PROJECT NUMBER:	R14150N-01G

2.2.4

P:\003 Harnett County\000003 Corrective Action Plan CAP\Cad\As Built\000003 Transfer As Built.dwg January 24, 2014 2:26:18 PM

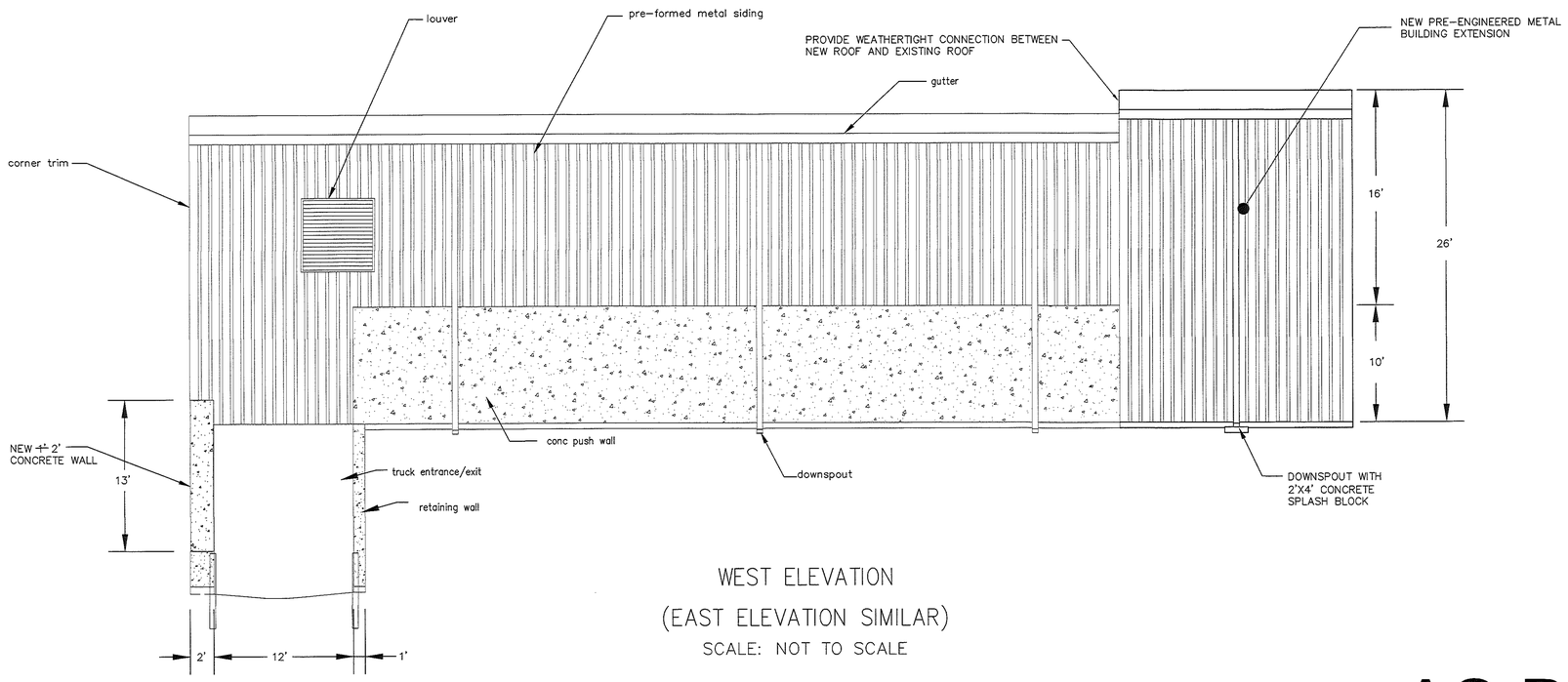


NORTH ELEVATION

SCALE: NOT TO SCALE

Permit No.	Date	Document ID No.
43-07T	January 30, 2014	20458

DOCUMENT APPROVED
Division of Waste Management
Solid Waste Section
Received Dated: **January 24, 2014**
Date: **January 30, 2014** By: **Ming-Tai Chao**



WEST ELEVATION

(EAST ELEVATION SIMILAR)

SCALE: NOT TO SCALE

AS BUILT

NORTH CAROLINA PROFESSIONAL SEAL 029909 ENGINEER TITUS CLAYTON CTC JR.
7-24-2014

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www.dae.com
FIRM # C-0861

ELEVATIONS

HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

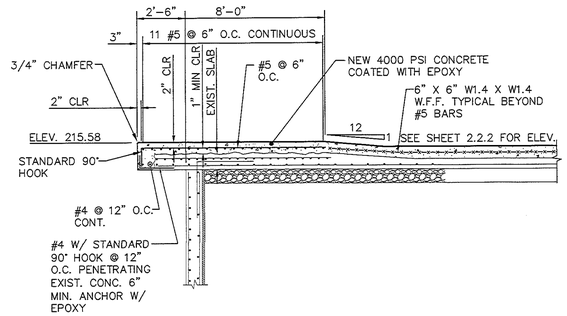
REVISIONS

10/4/13 AS BUILT

DESIGNED BY:	CTC Jr.
DRAWN BY:	SBK
CHECKED BY:	CTC Jr.
SCALE:	NONE
DATE:	-
PROJECT NUMBER:	R14150N-01G

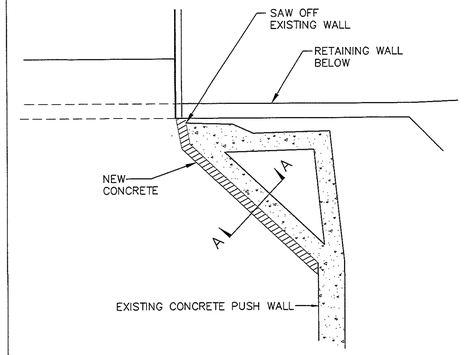
2.2.5

P:\003 Harnett County\020008 Corrective Action Plan CAP\Cad\As Built\020008 Transfer As Built.dwg January 24, 2014 2:26:18 PM

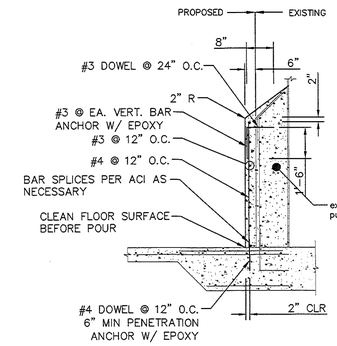


7 TIPPING FLOOR REPAIR DETAIL

SCALE: NONE



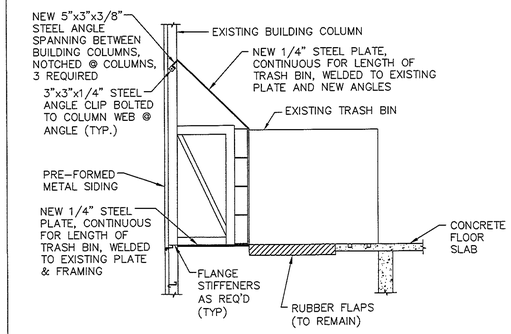
PLAN



SECTION A–A

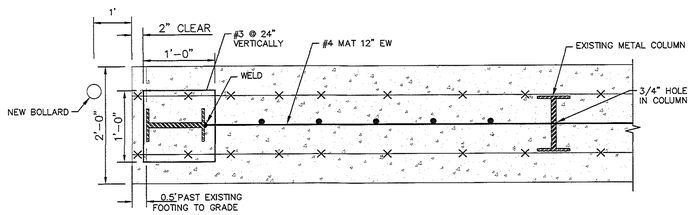
8 TYPICAL PUSH WALL REPAIR DETAIL

SCALE: NONE



9 TRASH BIN ALTERATIONS DETAIL

SCALE: NONE

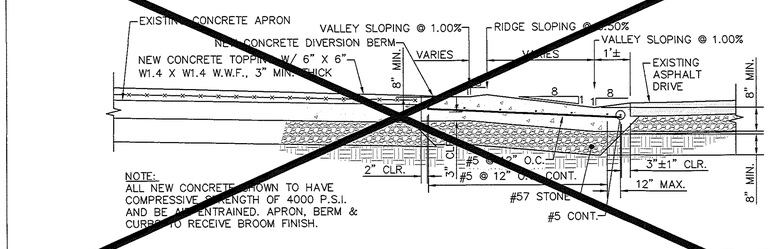


PLAN

5 CONCRETE WALL AT LOWER LEVEL DETAIL

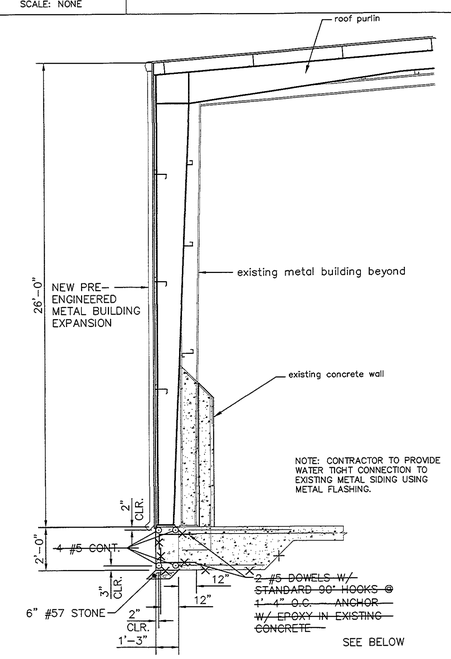
SCALE: NONE

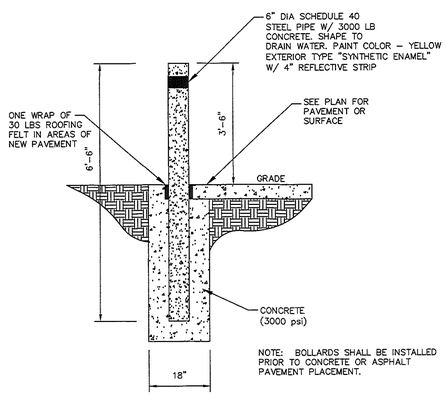
SEE SHEET 2.2.2A



6 CONCRETE DIVERSION BERM DETAIL

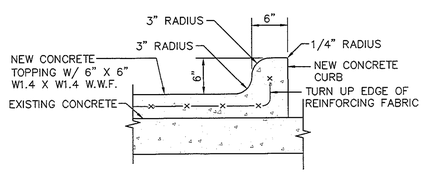
SCALE: 1/2" = 1'-0"





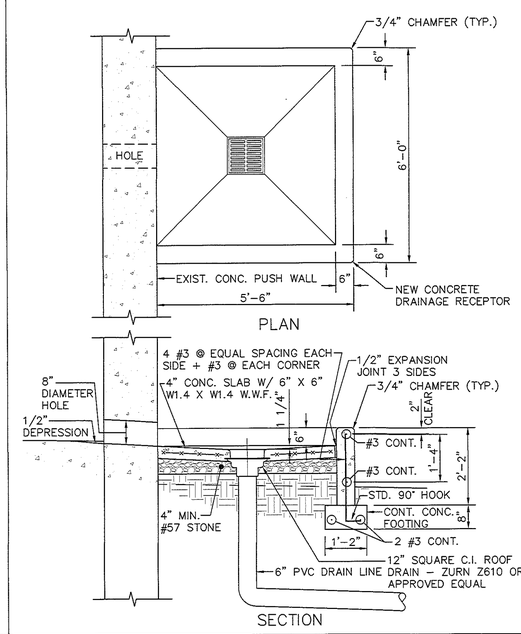
1 TYPICAL BOLLARD DETAIL

SCALE: NONE



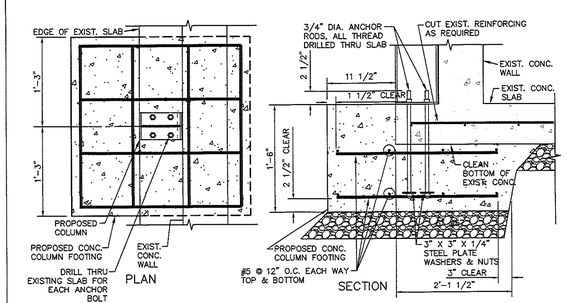
2 CURB DETAIL

SCALE: 1" = 1'-0"



3 DRAINAGE RECEPTOR DETAIL

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



4 WALL SECTION

SCALE: NONE

AS BUILT

Draper Aden Associates
Engineering • Surveying • Environmental Services
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Richmond, VA
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Charlottesville, VA
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FIRM # C-0861

NORTH CAROLINA PROFESSIONAL SEAL 026909 ENGINEER C. TYRUS CLAYTON, JR.
1-24-2014

DETAILS
HARNETTT COUNTY
DUNN-ERWIN LANDFILL PROJECT 2
HARNETT COUNTY, NORTH CAROLINA

REVISIONS
10/4/13 AS BUILT

DESIGNED BY: CTC Jr.
DRAWN BY: SBK
CHECKED BY: CTC Jr.
SCALE: AS NOTED
DATE: -
PROJECT NUMBER: R14150N-01G

2.2.6

P:\003 Harnett County\002\005 Corrective Action Plan CAP\CadAs Built\002005 Transfer As Built.dwg January 24, 2014 2:31:51 PM

From:	Tyrus Clayton
To:	Chao, Ming-tai
Cc:	Amanda Bader (abader@harnett.org); Shackelford, Dennis; Randy W. Smith; Ryan Sadler
Subject:	RE: Dunn Erwin Transfer Station
Date:	Friday, January 24, 2014 4:15:46 PM
Attachments:	image001.jpg LOT 14 0124 Chao Transfer Station Asbuilt Cert CTCJr. 03002B.PDF

Mr. Chao,

Please find attached the asbuilt documentation for the Transfer Station. Let us know if you require a hard copy.

C. Tyrus Clayton, Jr., PE
Senior Project Manager

Draper Aden Associates
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Lasting Positive Impact

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tclayton@daa.com
www.daa.com

All the Stormwater News That's Fit to Print - The Inlet

Please consider the environment before printing this email

From: Ryan Sadler
Sent: Friday, January 24, 2014 10:18 AM
To: Chao, Ming-tai
Cc: Amanda Bader (abader@harnett.org); Shackelford, Dennis; Tyrus Clayton
Subject: RE: Dunn Erwin Transfer Station

Mr. Chao,
Thank you for your response. We should have the documents to you electronically later this afternoon.
Regards,

Ryan Sadler
Project Manager

Draper Aden Associates
Engineering • Surveying • Environmental Services
Lasting Positive Impact

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rsadler@daa.com
www.daa.com

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Please consider the environment before printing this email

From: Chao, Ming-tai [mailto:ming.chao@ncdenr.gov]
Sent: Friday, January 24, 2014 9:52 AM
To: Shackelford, Dennis
Cc: Ryan Sadler; Amanda Bader (abader@harnett.org)
Subject: RE: Dunn Erwin Transfer Station

Hey Dennis:

Good morning. I just came back from LMOP conference last night and spent some time reading through 100s e-mail messages and finally got a moment this morning to respond your e-mail. I state my concerns below:

The permit conditions in the facility PTC/PTO (Doc ID 18605) required the County to submit a Construct Record Report and as-built drawings. CT Clayton has submitted the electronic copies (in two CDs) of field daily reports and photos during the courses of the facility improvement/construction last year. DAA doesn't need to submit this portion again. For as-built drawings, it is imperative for the County and us to know the following items:

- the locations of new sumps, and the sump(s) was plugged and abandoned in place.
- the final floor plan/grading – building and the ramp area [deviated from the original plan and amended (Doc ID 19952) in 10/2013 which was approved by the Solid Waste Section (Doc ID 19953)].
- the alignments (drain-line runs) of the new piping connecting new sumps by the building structure to the new installed tanks (USTs). (What is the status of the old tanks ?)
- the drain line alignment from the tanks to the new constructed pump stations.

I recalled in 2013 meeting, I told C.T Clayton and Brenda Bader there was no need to generate a new set of CAD drawings for the new drain-line/piping alignments if they had

been adjusted in the field. The new alignment(s) can be added by hand and drawing "Red Lines" on the original drawings. DAA can do it in the same way. Of course, if the drain-line alignments hadn't been adjusted in the field and installed according to the originally approved drawings; there is no need to submit as-built drawings stated in the above-mentioned last two bullet items. DAA can state and confirm that there is no deviation from the original plan (Doc ID 17302) in the Construction Record Report.

Last time (10/31/13) when we visited the site, the new pump station was not completed yet. If the pump station is completed, tested and certified to operate, then I have no further concern. If the pump station is not functional/operational; then, the County has to inform us how the leachate/wash-down liquid will be handled and managed (pump & haul?).

Please let me know if have any other question or concerns. Have a wonderful weekend.

Ming Chao

Ming-Tai Chao, P.E.
Environmental Engineer
Permitting Branch, Solid Waste Section
Division of Waste Management
(Mailing Address)
1646 Mail Service Center
Raleigh, NC 27699-1646
(Street Address)
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Raleigh, NC 27603
Tel. 919-707-8251
ming.chao@ncdenr.gov
http://portal.ncdenr.org/web/wm/sw

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From: Shackelford, Dennis
Sent: Wednesday, January 22, 2014 2:23 PM
To: Chao, Ming-tai
Cc: Shackelford, Dennis
Subject: FW: Dunn Erwin Transfer Station

In addition to the below, is there anything else that they need to provide to you?

Dennis E. Shackelford
Eastern District Supervisor
Department Of Environment & Natural Resources
Division of Waste Management
Solid Waste Section
225 Green Street, Suite 714
Fayetteville, North Carolina 28301

dennis.shackelford@ncdenr.gov
.....
Dept. Tel: (910)-433-3300
Office Tel: (910)-433-3349
Fax: (910)-486-0707
.....
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From: Ryan Sadler [mailto:rsadler@daa.com]
Sent: Wednesday, January 22, 2014 2:20 PM
To: Shackelford, Dennis
Subject: Dunn Erwin Transfer Station

Dennis,
I just want to confirm with you if all you need to see to satisfy the conditions of the permit to construct/operate is a completed set of as-builts and the remainder of the construction inspection reports. Please let us know if that will suffice or if there is anything else beyond that you may be looking for.
Thanks,

Ryan Sadler
Project Manager

Draper Aden Associates
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46 W. Washington Street
Coats, NC 27521
phone 910.897.7070/ fax 910.897.6767 / mobile 919.795.6299
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