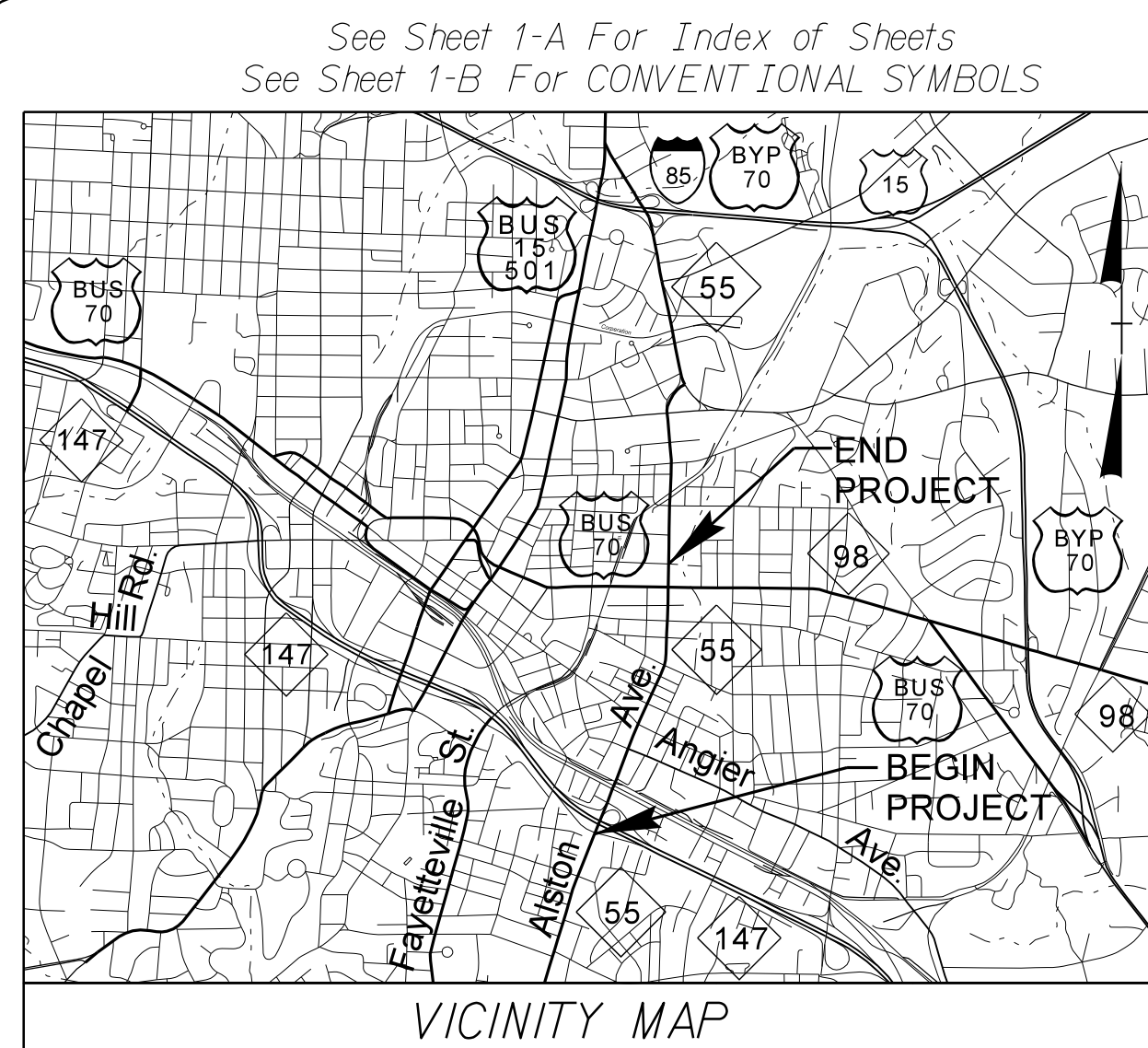


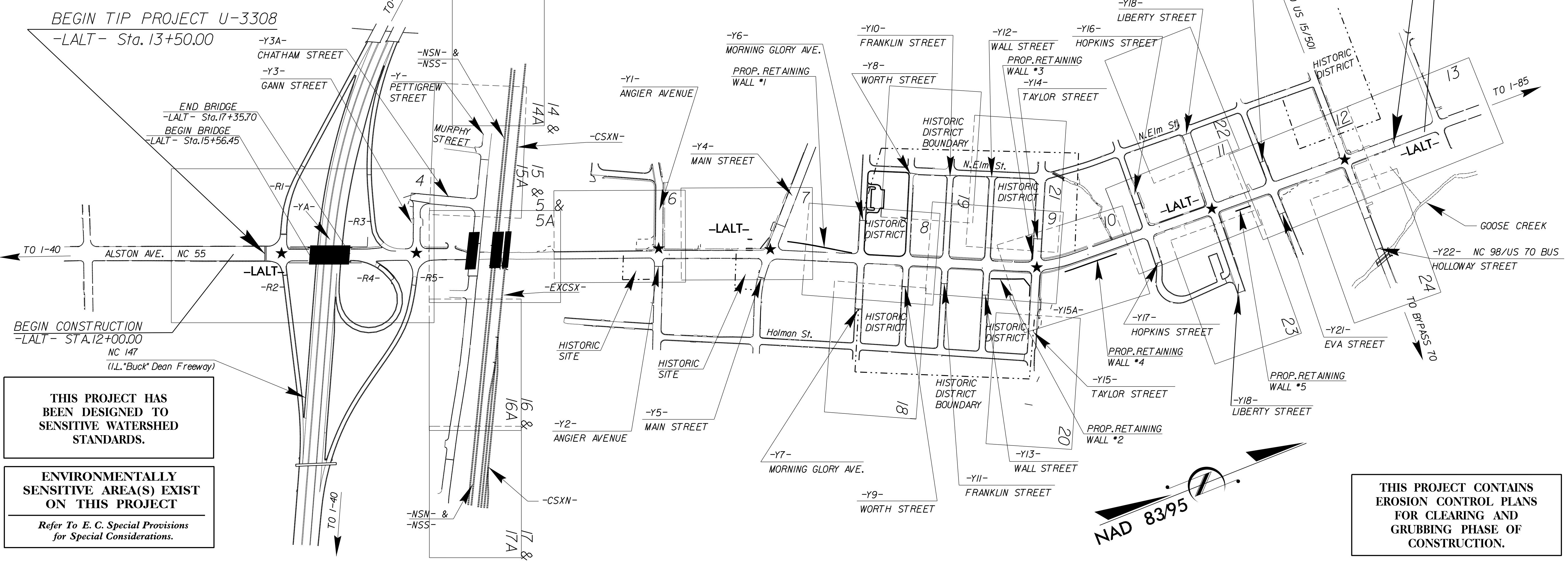
TIP PROJECT: U-3308
CONTRACT: C203567



STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
DURHAM COUNTY

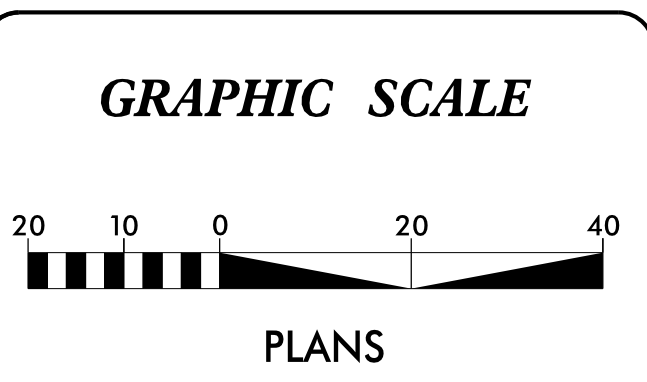
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3308	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34915.1.1	STP-0055(20)	PE	
34915.2.1	STP-0055(20)	R/W	
34915.2.U1	STP-0055(20)	UTILITIES	

LOCATION: NC 55 (ALSTON AVE.) FROM NC 147 (I.L. "BUCK" DEAN FREEWAY) TO NORTH OF US 70 BUS/NC 98 (HOLLOWAY ST.)
TYPE OF WORK: Grading, Drainage, Curb & Gutter, Paving, Sidewalks, Retaining Walls, Structures, Railroad Track Work and Signals



THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.
ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT
 Refer To E. C. Special Provisions for Special Considerations.

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.



ROADSIDE ENVIRONMENTAL UNIT
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

 Reviewed by:
 Jeff Walston, PE

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:
STVRALPH WHITEHEAD ASSOCIATES, INC.
 900 WEST TRADE STREET, SUITE 715
 CHARLOTTE, NC 28202-1144

2012 STANDARD SPECIFICATIONS

 Level III Designer #3645
 Ryan O'Mahony, PE

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

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 jwalston AT RENW27149

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

*S.U.E. = *Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	⊙ EIP
Property Corner	-----
Property Monument	⊠ ECM
Parcel/Sequence Number	Ⓜ 123
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	⊠
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	Ⓢ
Well	Ⓦ
Small Mine	Ⓜ
Foundation	⊠
Area Outline	⊠
Cemetery	⊠
Building	⊠
School	⊠
Church	⊠
Dam	⊠

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	⊠
Jurisdictional Stream	-JS-
Buffer Zone 1	-BZ 1-
Buffer Zone 2	-BZ 2-
Flow Arrow	←
Disappearing Stream	→
Spring	⊙
Wetland	⊠
Proposed Lateral, Tail, Head Ditch	-----
False Sump	⊠

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	Ⓜ
Switch	⊠
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	Ⓜ
Proposed Right of Way Line with Concrete or Granite RW Marker	Ⓜ
Proposed Control of Access Line with Concrete CA Marker	Ⓜ
Existing Control of Access	Ⓜ
Proposed Control of Access	Ⓜ
Existing Easement Line	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Drainage / Utility Easement	-DUE-
Proposed Permanent Utility Easement	-PUE-
Proposed Temporary Utility Easement	-TUE-
Proposed Aerial Utility Easement	-AUE-
Proposed Permanent Easement with Iron Pin and Cap Marker	Ⓜ

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Curb Ramp	Ⓜ
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊠
Pavement Removal	⊠
Vegetation:	
Single Tree	⊠
Single Shrub	⊠
Hedge	-----
Woods Line	-----

Orchard	⊠
Vineyard	⊠

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	Ⓢ
Storm Sewer	-S-

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	Ⓜ
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	Ⓜ
H-Frame Pole	●
Recorded U/G Power Line	-P-
Designated U/G Power Line (S.U.E.*)	-P-

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	Ⓜ
Telephone Booth	Ⓜ
Telephone Pedestal	Ⓜ
Telephone Cell Tower	Ⓜ
U/G Telephone Cable Hand Hole	Ⓜ
Recorded U/G Telephone Cable	-T-
Designated U/G Telephone Cable (S.U.E.*)	-T-
Recorded U/G Telephone Conduit	-TC-
Designated U/G Telephone Conduit (S.U.E.*)	-TC-
Recorded U/G Fiber Optics Cable	-T FO-
Designated U/G Fiber Optics Cable (S.U.E.*)	-T FO-

WATER:

Water Manhole	Ⓜ
Water Meter	Ⓜ
Water Valve	⊠
Water Hydrant	Ⓜ
Recorded U/G Water Line	-----
Designated U/G Water Line (S.U.E.*)	-----
Above Ground Water Line	-A/G Water-

TV:

TV Satellite Dish	Ⓜ
TV Pedestal	Ⓜ
TV Tower	⊠
U/G TV Cable Hand Hole	Ⓜ
Recorded U/G TV Cable	-TV-
Designated U/G TV Cable (S.U.E.*)	-TV-
Recorded U/G Fiber Optic Cable	-TV FO-
Designated U/G Fiber Optic Cable (S.U.E.*)	-TV FO-

GAS:

Gas Valve	⊠
Gas Meter	Ⓜ
Recorded U/G Gas Line	-G-
Designated U/G Gas Line (S.U.E.*)	-G-
Above Ground Gas Line	-A/G Gas-

SANITARY SEWER:

Sanitary Sewer Manhole	Ⓜ
Sanitary Sewer Cleanout	Ⓜ
U/G Sanitary Sewer Line	-SS-
Above Ground Sanitary Sewer	-A/G Sanitary Sewer-
Recorded SS Forced Main Line	-FSS-
Designated SS Forced Main Line (S.U.E.*)	-FSS-

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	⊠
Utility Located Object	○
Utility Traffic Signal Box	Ⓜ
Utility Unknown U/G Line	-2UTL-
U/G Tank; Water, Gas, Oil	⊠
Underground Storage Tank, Approx. Loc.	Ⓜ
A/G Tank; Water, Gas, Oil	⊠
Geoenvironmental Boring	⊠
U/G Test Hole (S.U.E.*)	Ⓜ
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3308	EC-2	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34915.1.1	STP-0055(20)	PE	
34915.2.1	STP-0055(20)	R/W	
34915.2.U1	STP-0055(20)	UTILITIES	

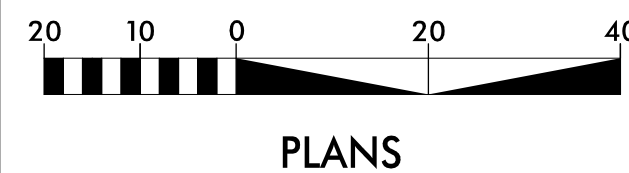
TIP PROJECT: U-3308

CONTRACT: C203567

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

GRAPHIC SCALE



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Level III Designer
Ryan O'Mahony, PE #3645

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared In the Office of:
STVRALPH WHITEHEAD ASSOCIATES, INC.
900 WEST TRADE STREET, SUITE 715
CHARLOTTE, NC 28202-1144
2012 STANDARD SPECIFICATIONS

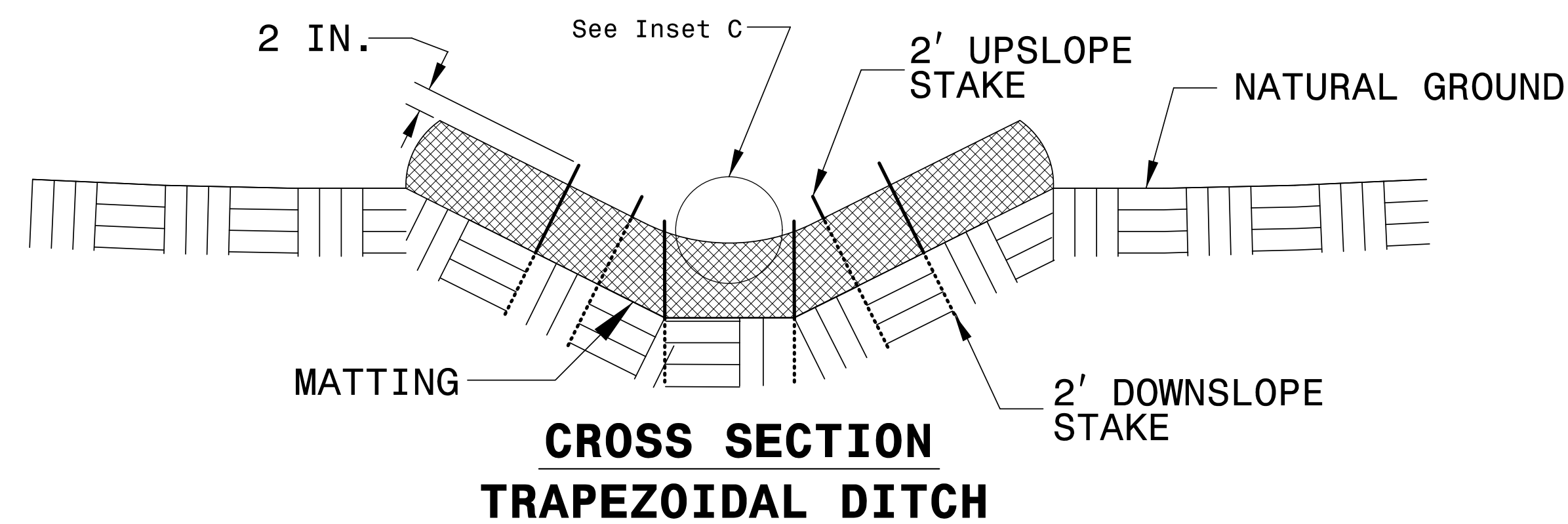
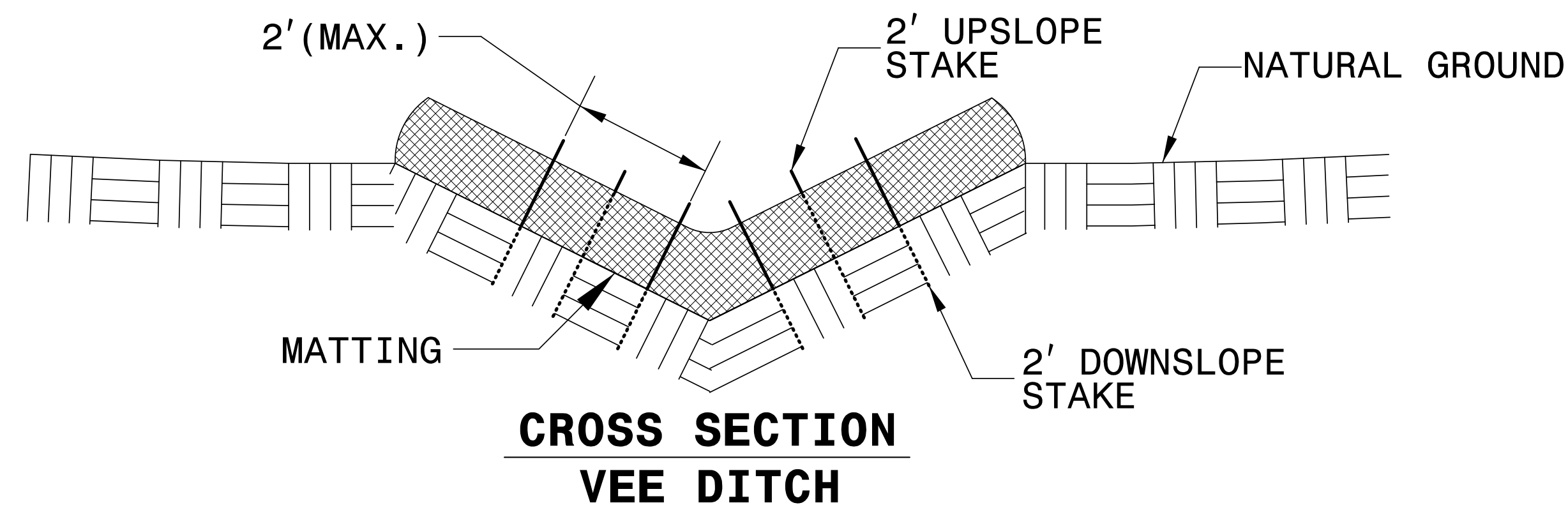
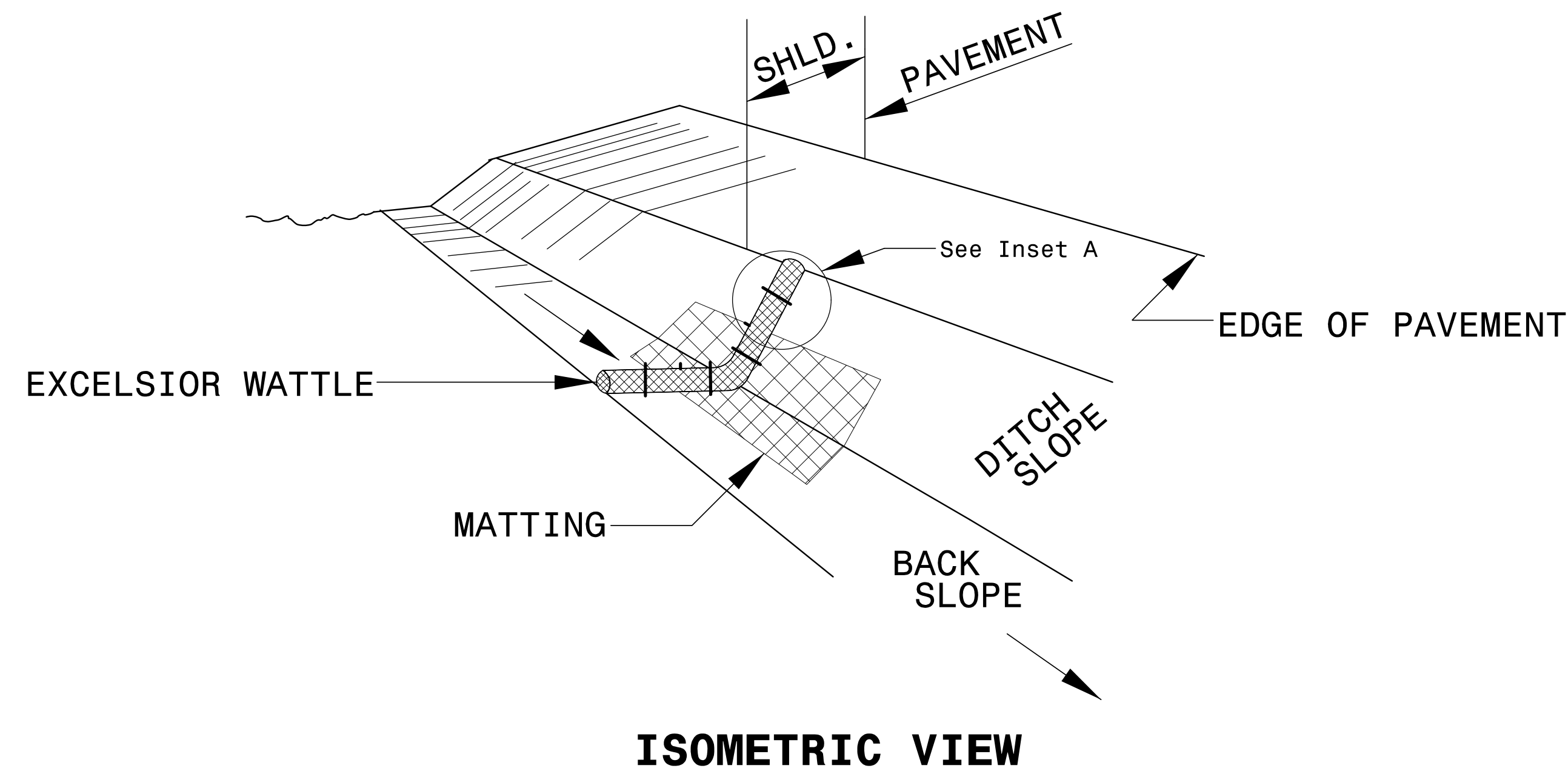
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
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1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

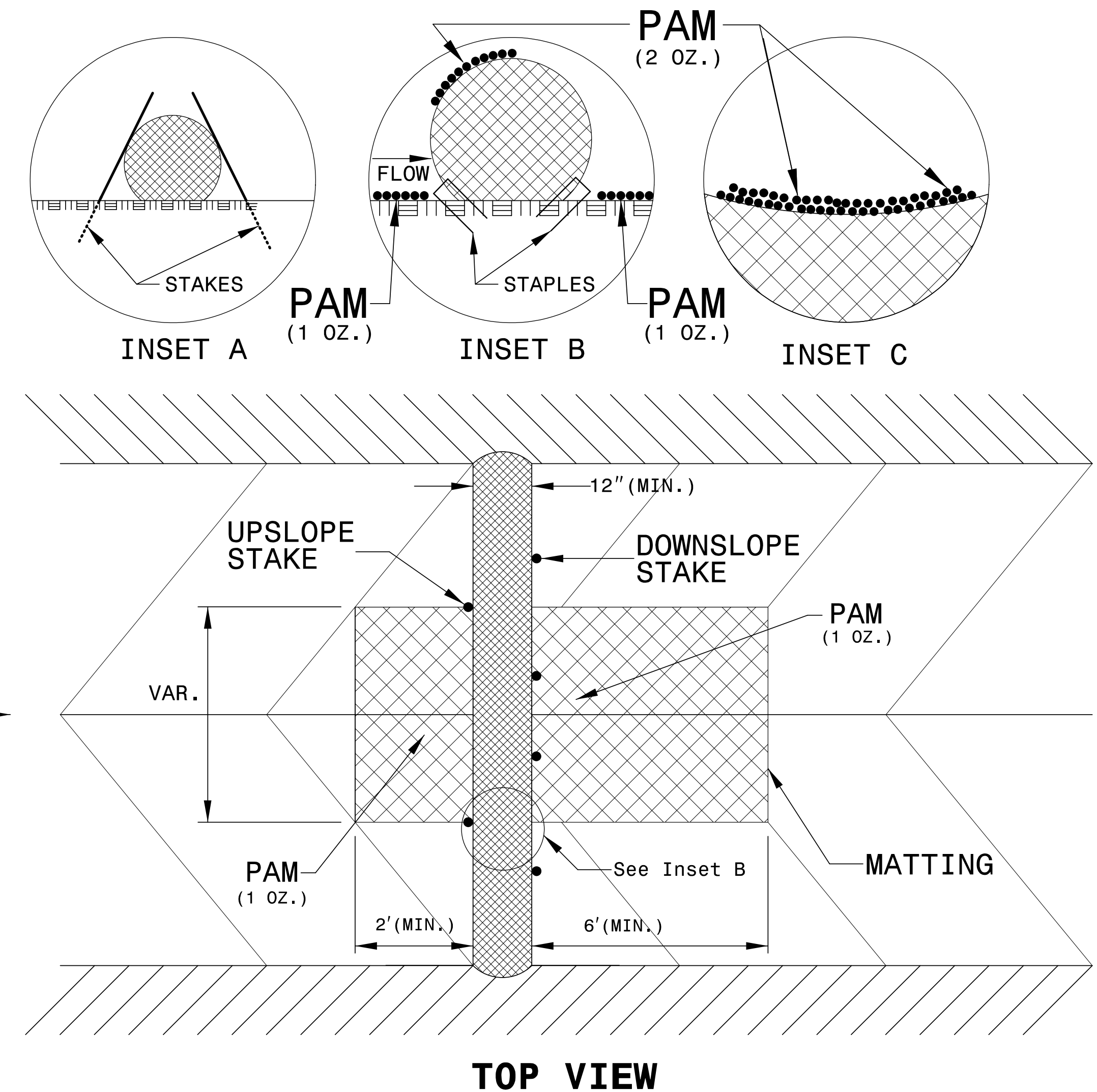
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

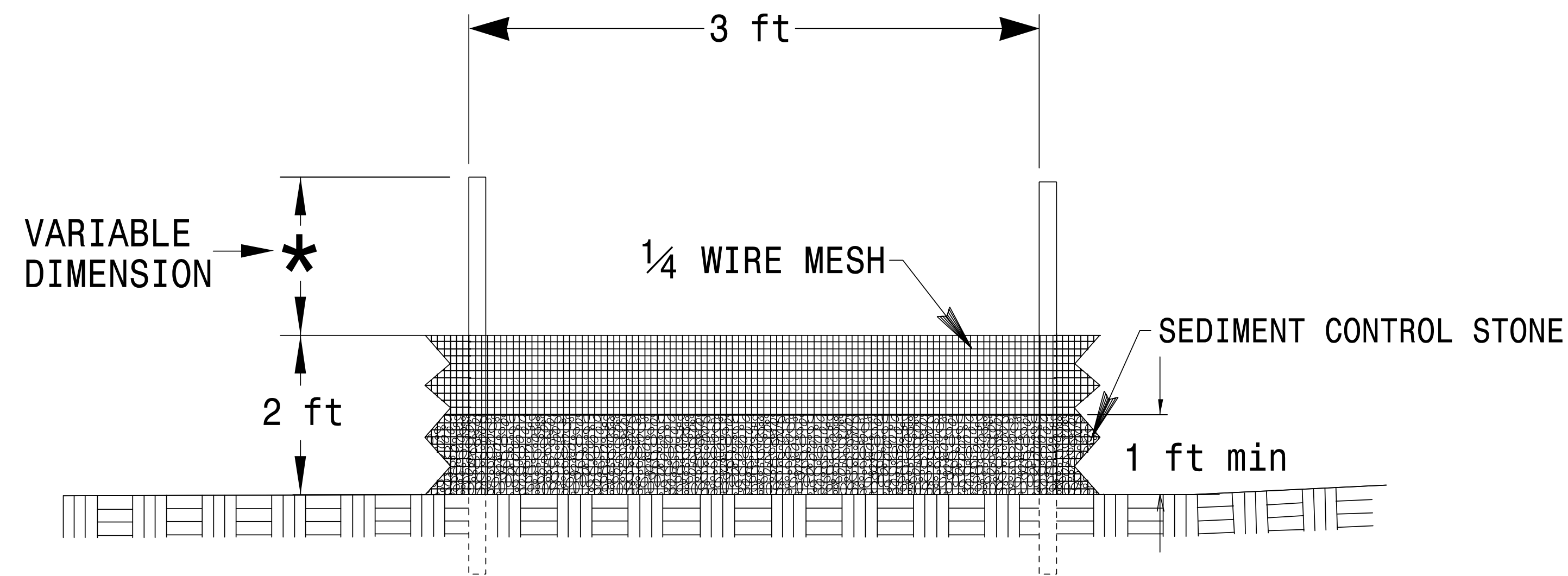
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



PROJECT REFERENCE NO. <i>U-3308</i>	SHEET NO. <i>EC-2B</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SPECIAL SEDIMENT CONTROL FENCE



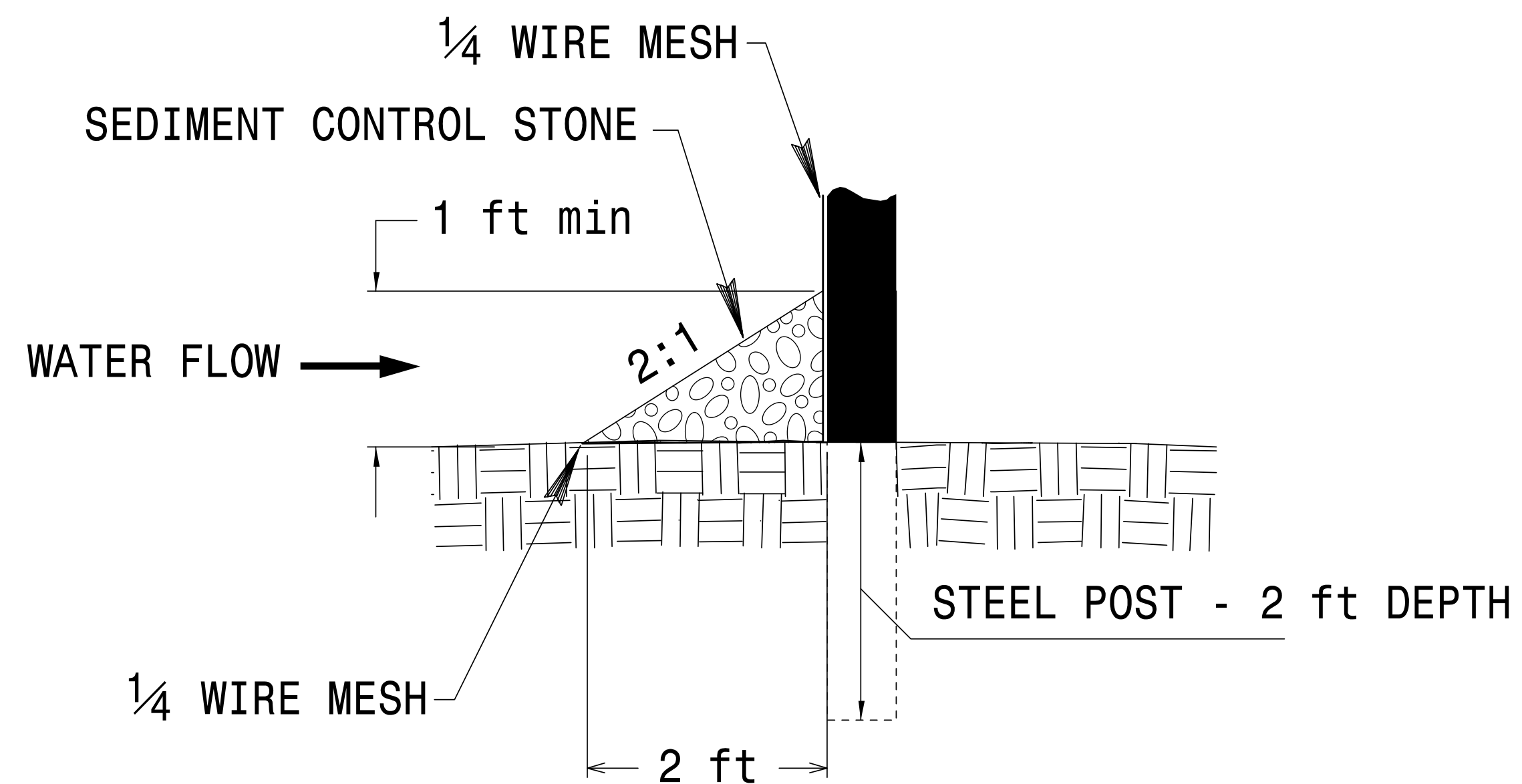
GENERAL NOTES:

USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.

USE HARDWARE CLOTH 24 GAUGE WIRE MESH WITH 1/4 INCH MESH OPENINGS.

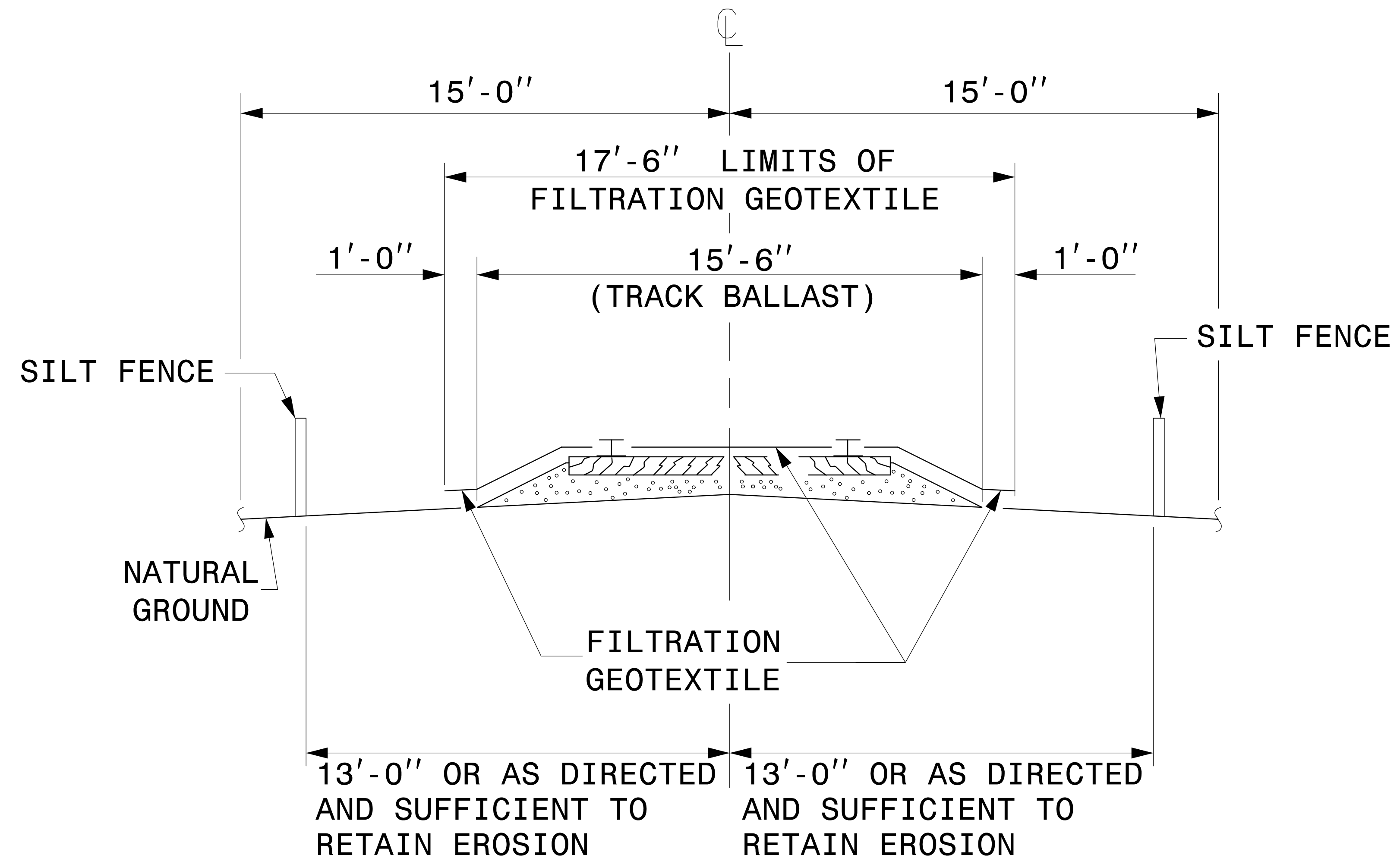
INSTALL 5 FT. SELF FASTENER ANGLE STEEL POST 2 FT. DEEP MINIMUM.

SPACE POST A MAXIMUM OF 3 FT.



PROJECT REFERENCE NO. <i>U-3308</i>	SHEET NO. <i>EC-2C</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

RAILROAD EROSION CONTROL DETAIL



NOTES

INSTALL RAILROAD EROSION CONTROL MEASURES PRIOR TO PERFORMING ANY WORK IN THE RAILROAD RIGHT-OF-WAY.

ADDITIONAL EROSION CONTROL MEASURES FOR PROTECTION OF RAILROAD DITCHES MAY BE REQUIRED AS DIRECTED.

NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR RAILROAD EROSION CONTROL MEASURES.

EXTEND LIMITS OF SILT FENCE AND FILTRATION GEOTEXTILE PARALLEL TO RAILROAD A MINIMUM OF 10'-0" OUTSIDE EDGE OF SUPERSTRUCTURE OR TOE OF SLOPE ON CONSTRUCTION. A GREATER LENGTH OF SILT FENCE OR FILTRATION GEOTEXTILE MAY BE REQUIRED AS DIRECTED.

NAIL FILTRATION GEOTEXTILE TO TIMBER RAIL TIES WITH PRIME SOURCE "GRIP CAP" OR EQUIVALENT. SECURE FILTRATION GEOTEXTILE ON SHOULDER AS DIRECTED BY THE RAILROAD AND NCDOT.

PROJECT REFERENCE NO. <i>U-3308</i>	SHEET NO. <i>EC-3A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

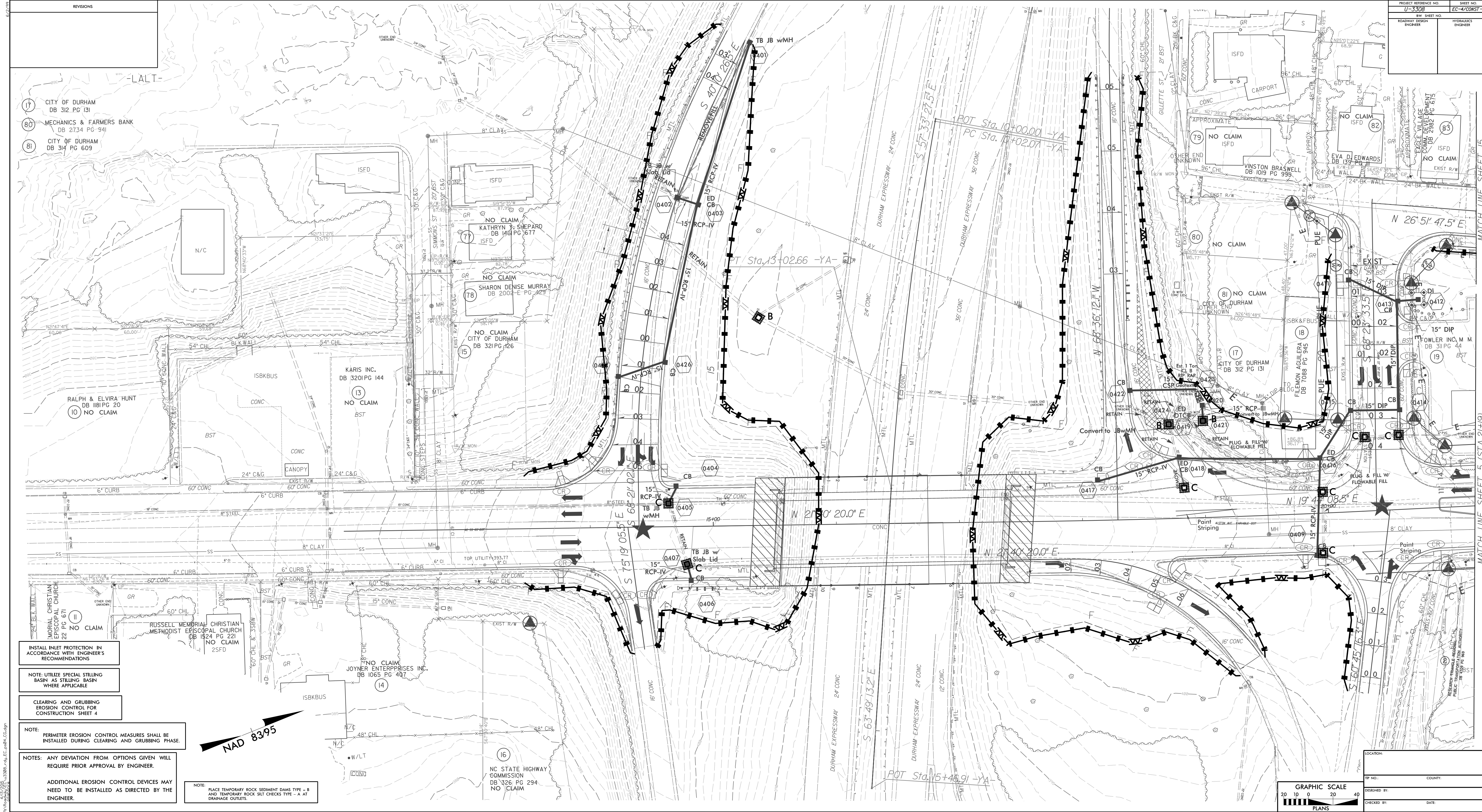
R/W Revision 5/7/14 JCI
Existing Property Lines, Proposed Right of Way and Temporary Construction Lines Adjusted on Parcel 20

REVISIONS	

- (17) CITY OF DURHAM DB 312 PG 131
- (80) MECHANICS & FARMERS BANK DB 2734 PG 341
- (81) CITY OF DURHAM DB 314 PG 609

- INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS
- NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE
- CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4
- NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE
- NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.
- ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS



PROJECT REFERENCE NO.	SHEET NO.
11-3328	EC-4/CONST-4

R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER

TR NO.	COUNTY

DESIGNED BY: _____
CHECKED BY: _____
DATE: _____

MATCH LINE SHEET 15
MATCH LINE SHEET 5 (STA. 2+19)

RW Revision 6/1/14 JCL
Removed Permanent Utility Easement (PUE) from Parcel 20, Added PUE to Parcel 19

8/17/99
4/13/2015
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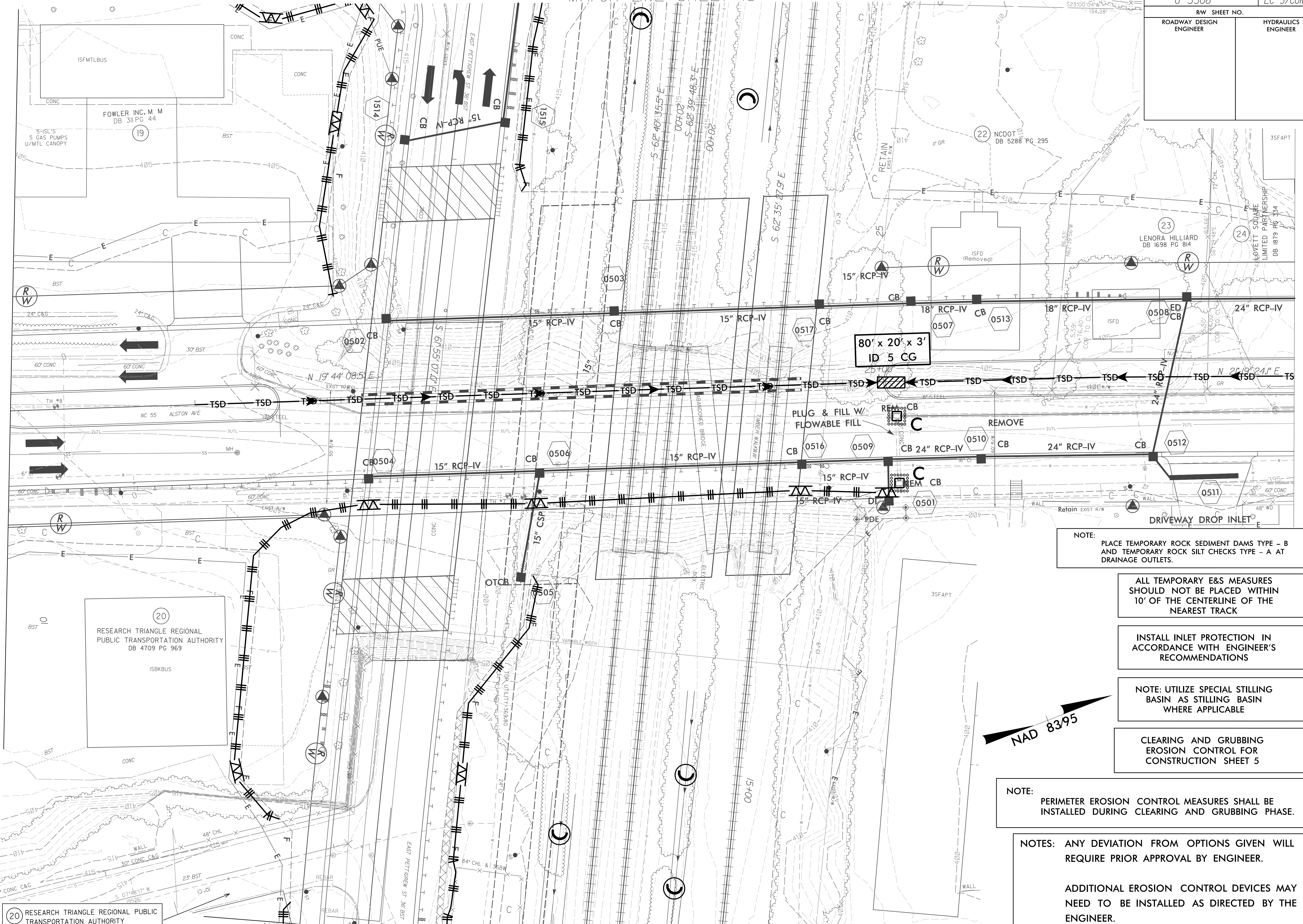
MATCH LINE SHEET 4 (STA. 2+19)

MATCH LINE SHEET 15

MATCH LINE SHEET 16

MATCH LINE SHEET 6 (STA. 26+82)

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-5/CONST.5
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

ALL TEMPORARY E&S MEASURES
SHOULD NOT BE PLACED WITHIN
10' OF THE CENTERLINE OF THE
NEAREST TRACK

INSTALL INLET PROTECTION IN
ACCORDANCE WITH ENGINEER'S
RECOMMENDATIONS

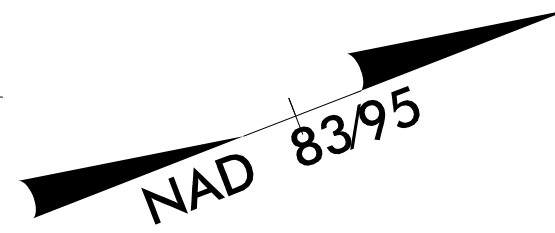
NOTE: UTILIZE SPECIAL STILLING
BASIN AS STILLING BASIN
WHERE APPLICABLE

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE
INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL
REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY
NEED TO BE INSTALLED AS DIRECTED BY THE
ENGINEER.



PROJECT REFERENCE NO. U-3308	SHEET NO. EC-6/CONST-6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

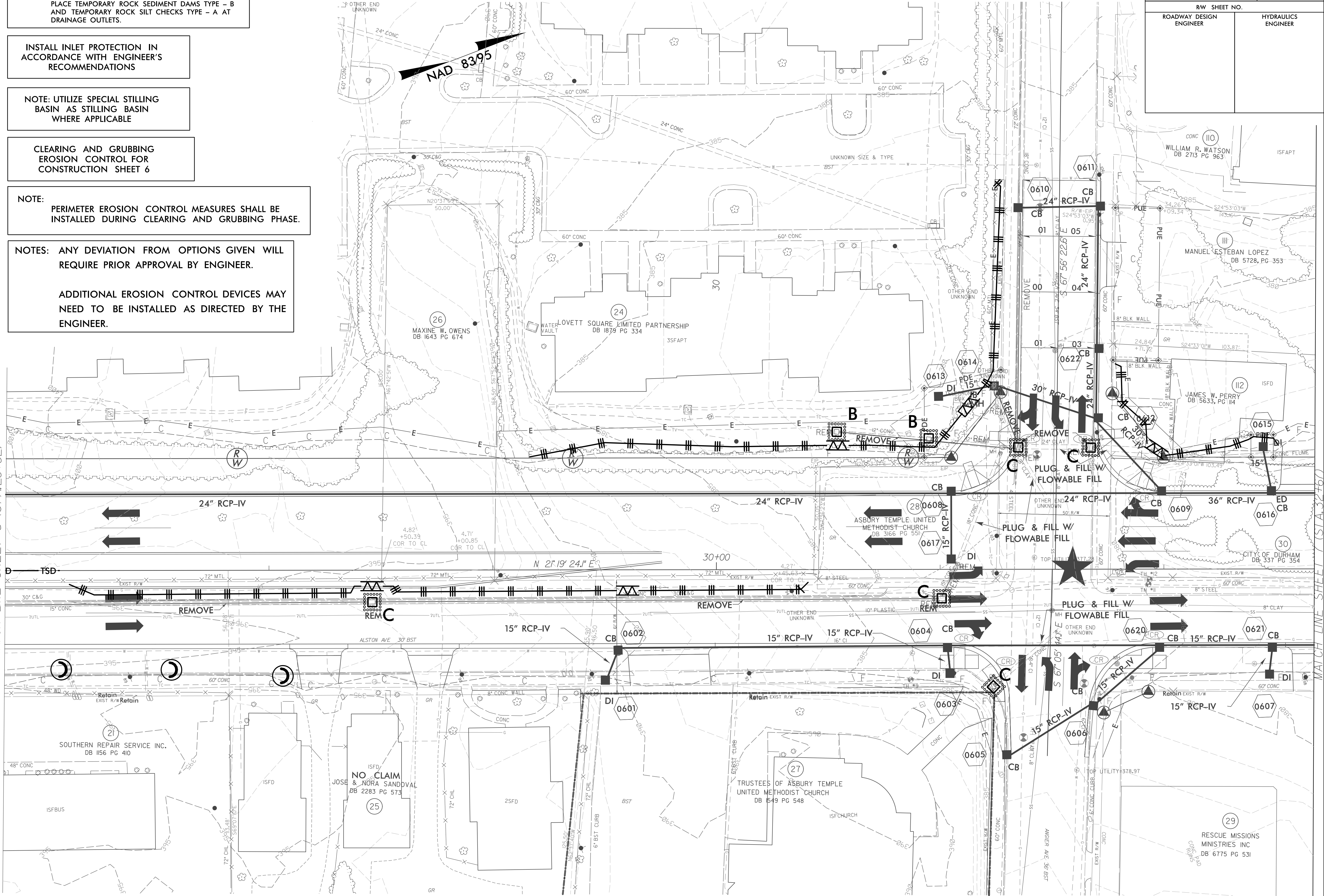
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

RW REVISION 6/1/14 JCL
Converted Permanent Utility Easement (PUE) to Temporary Construction Easement (TCE) and Adjusted PDE on Parcel 24

MATCH LINE SHEET 5 (STA.26+82)

MATCH LINE SHEET 7 (STA.32+76)



4/13/2015
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RW Revision 6/1/14 JCL
 Added Permanent Utility Easement (PUE) and Adjusted Temporary Construction Easements (TCE) on Parcels 37 and 118

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-7/CONST-7
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

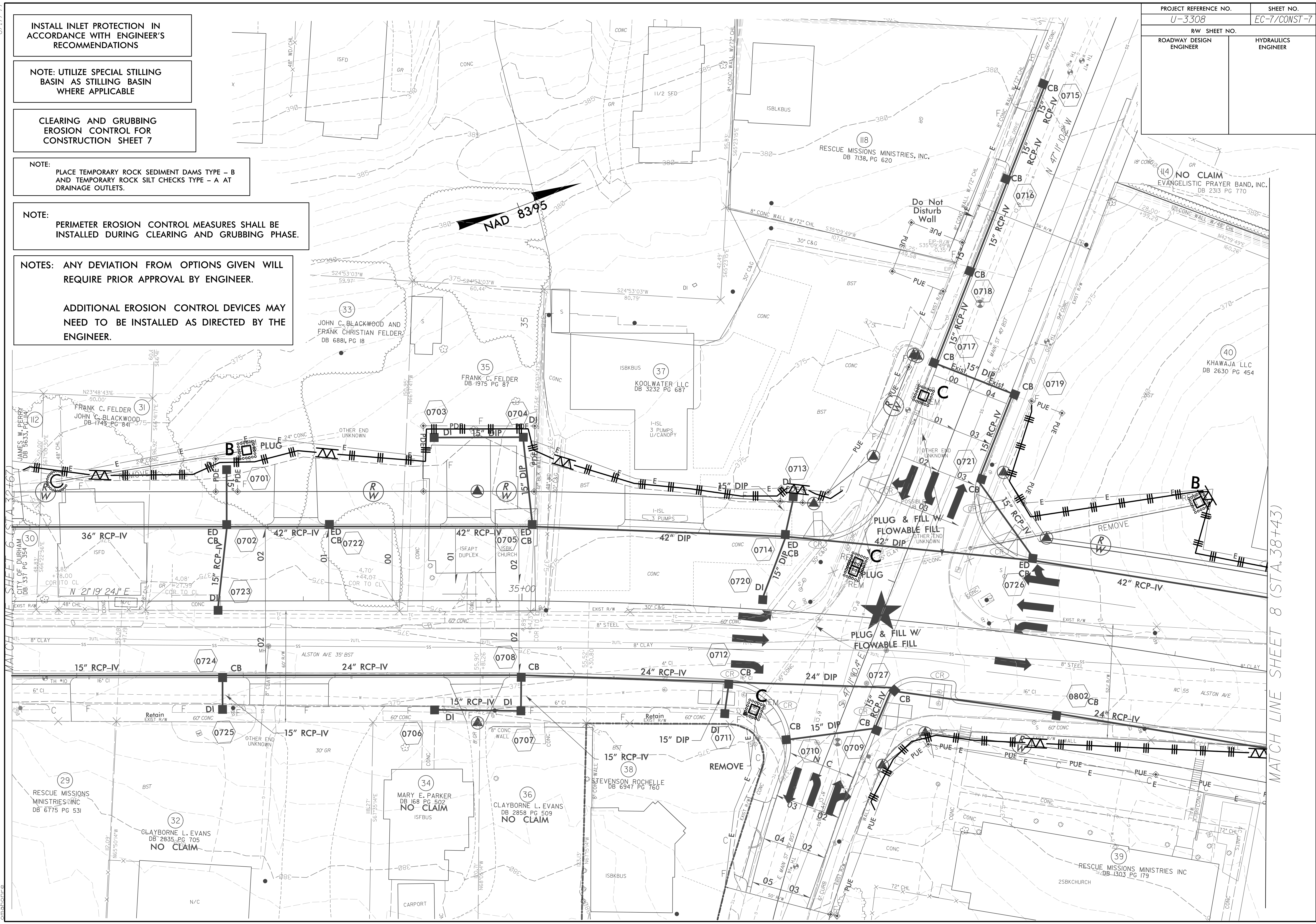
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 7

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



4/13/2015 R:\Projects\U-3308_rdu.ec_ps07_cg.dgn
 MATCH LINE SHEET 6 (STA 38+43)
 MATCH LINE SHEET 8 (STA 38+43)

R/W Revision 33114 JCL
 Added Prop. 12' Driveway on Parcel 46 Off of Worth St.

8/17/99

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

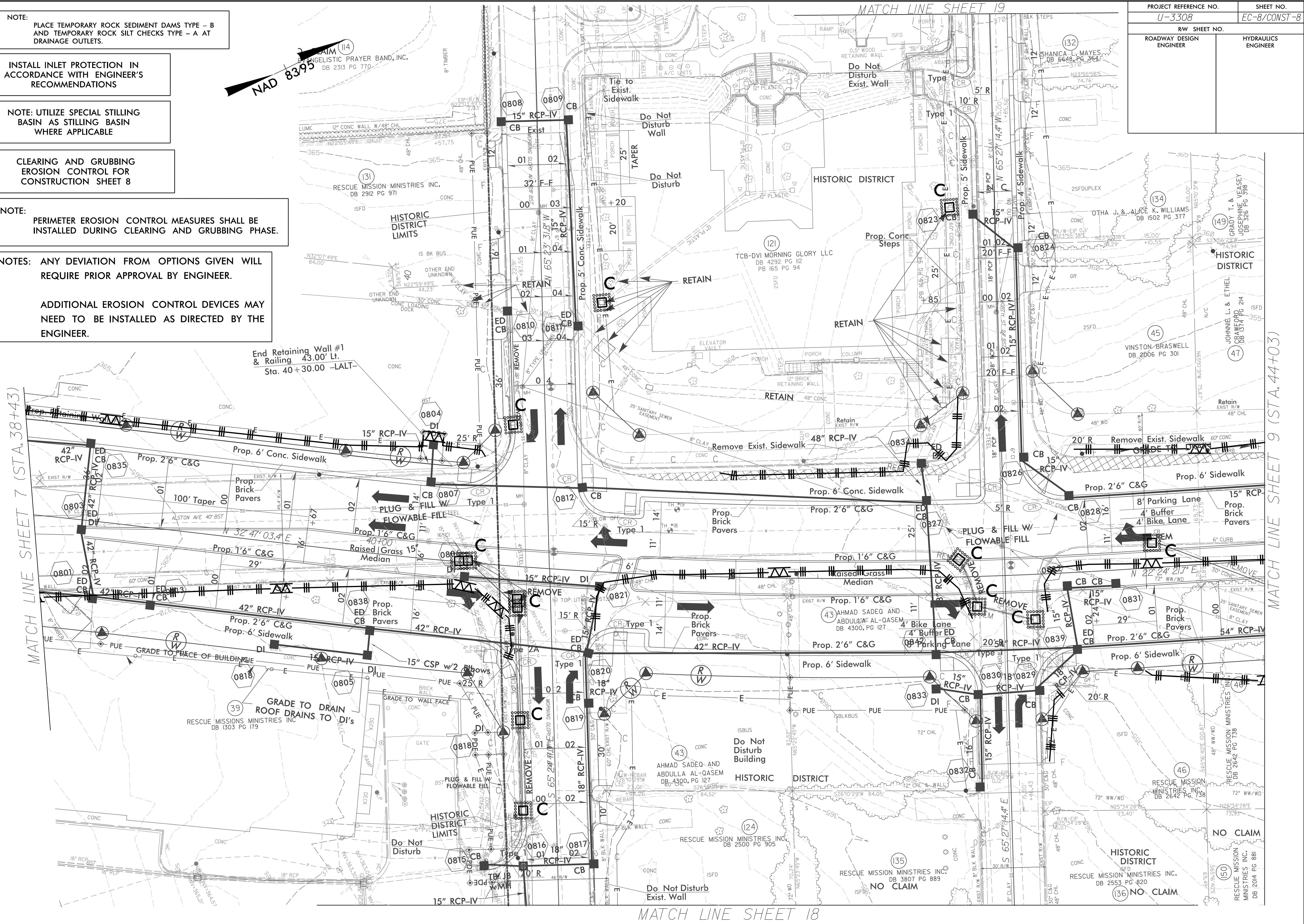
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 8

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-8/CONST-8
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



MATCH LINE SHEET 7 (STA. 38+43)

MATCH LINE SHEET 9 (STA. 44+03)

MATCH LINE SHEET 18

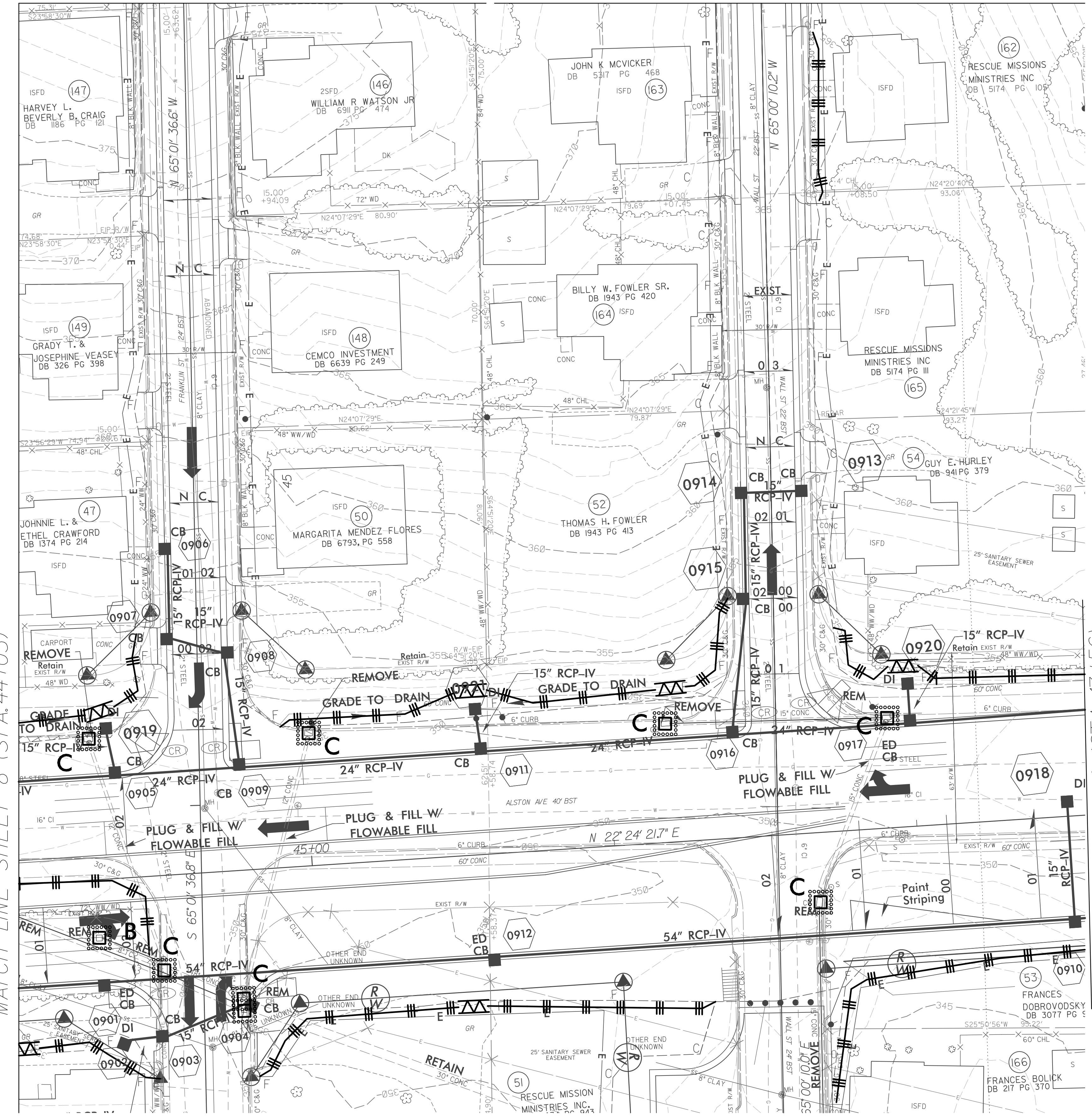
4/13/2015
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PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-9/CONST.9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCH LINE SHEET 8 (STA. 44+03)

MATCH LINE SHEET 10 (STA. 47+56)



INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 9

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

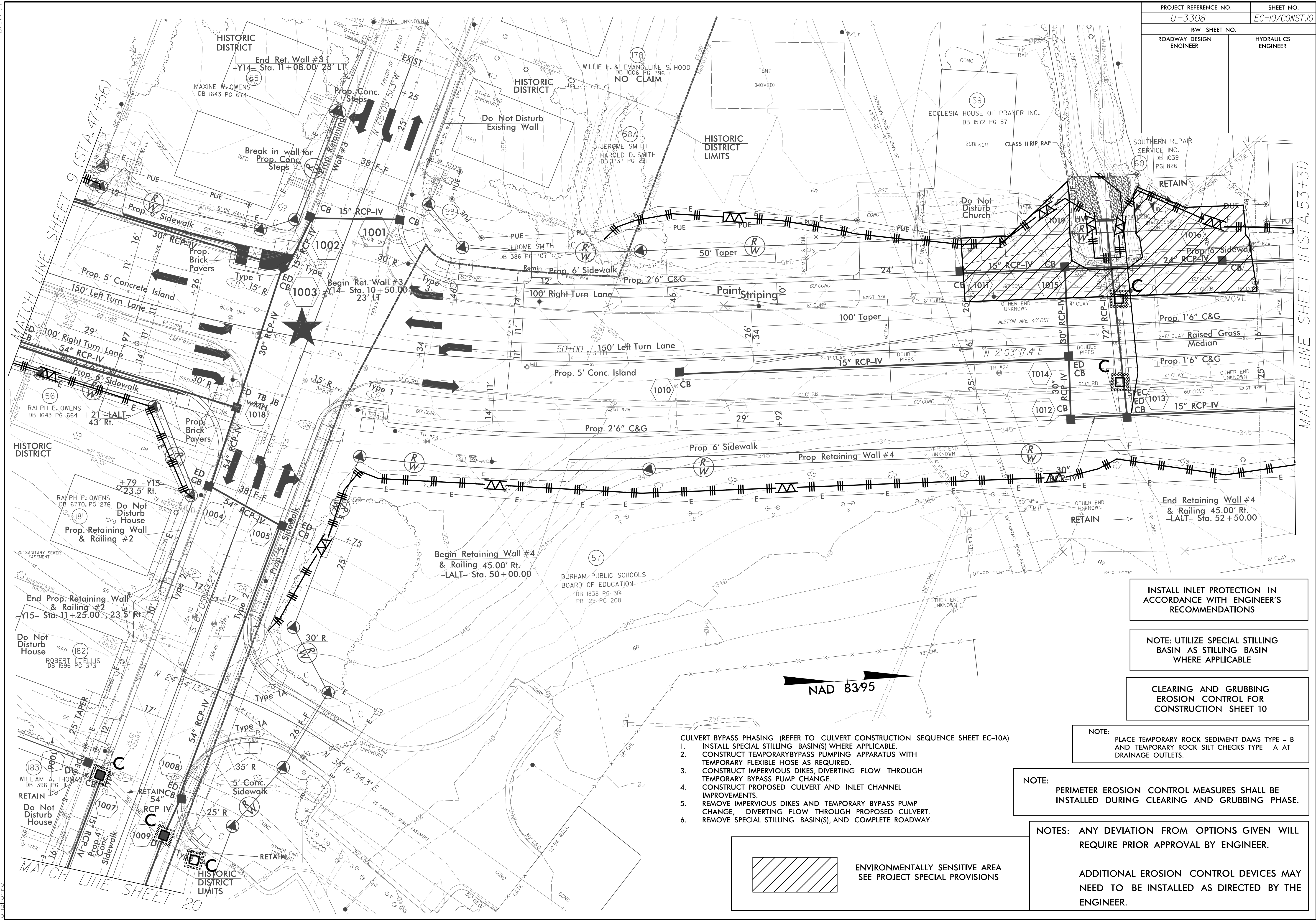
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

R/W Revision 3/31/14 JCL
 Added Proposed 12' Driveway to Parcel 46 Off of Franklin St.
 Changed Deed Book Description for Parcel 53

8/17/99
 4/13/2015
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PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-10/CONST.10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

RW Revision 6/11/14 JCL
 Converted Permanent Utility Easement (PUE) to Temporary Construction Easement (TCE) on Parcel 57, Converted TCE to PUE on Parcel 59, Added new PUE to Parcel 60.



INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 10

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

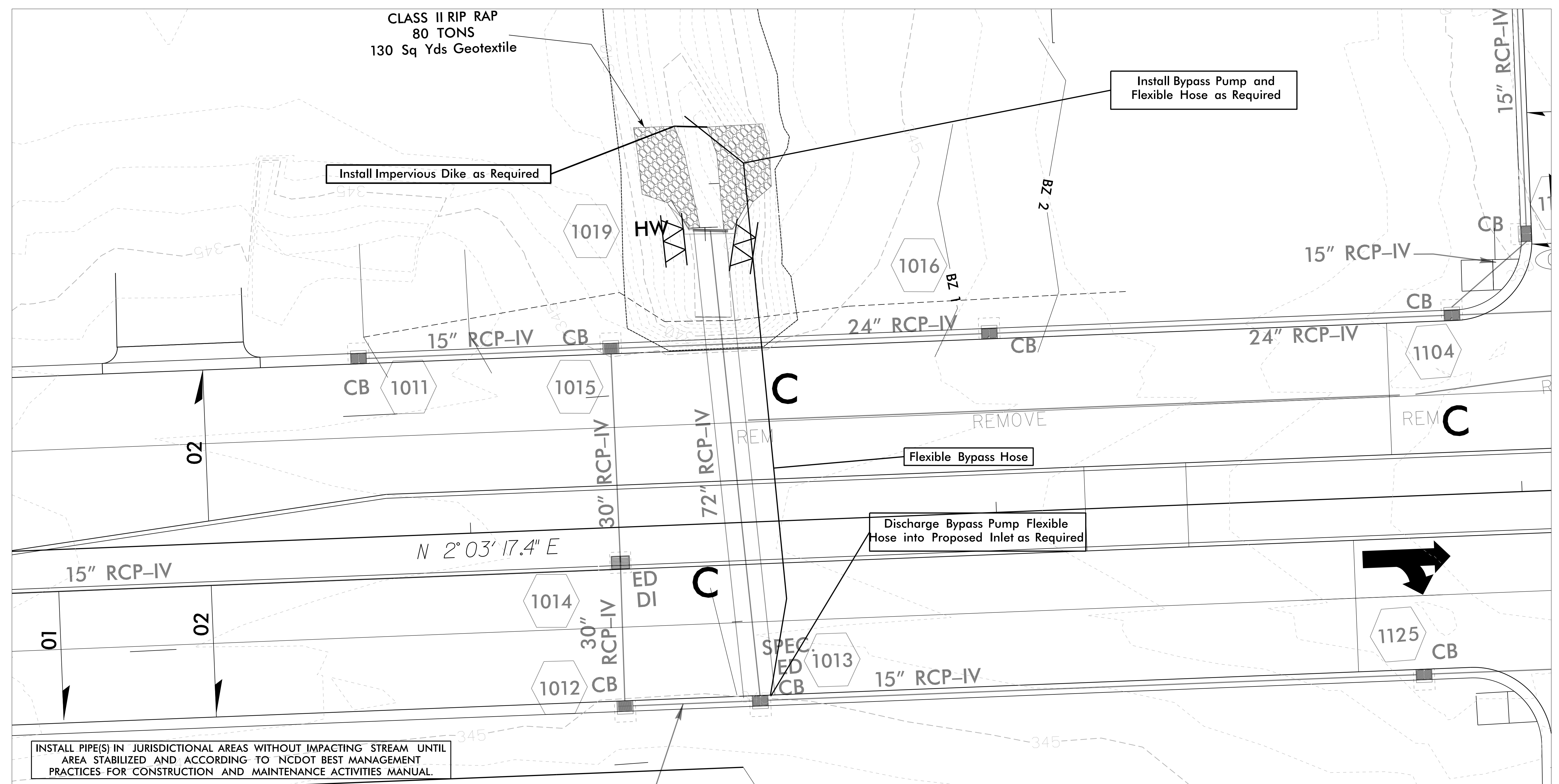
- CULVERT BYPASS PHASING (REFER TO CULVERT CONSTRUCTION SEQUENCE SHEET EC-10A)
1. INSTALL SPECIAL STILLING BASIN(S) WHERE APPLICABLE.
 2. CONSTRUCT TEMPORARY BYPASS PUMPING APPARATUS WITH TEMPORARY FLEXIBLE HOSE AS REQUIRED.
 3. CONSTRUCT IMPERVIOUS DIKES, DIVERTING FLOW THROUGH TEMPORARY BYPASS PUMP CHANGE.
 4. CONSTRUCT PROPOSED CULVERT AND INLET CHANNEL IMPROVEMENTS.
 5. REMOVE IMPERVIOUS DIKES AND TEMPORARY BYPASS PUMP CHANGE, DIVERTING FLOW THROUGH PROPOSED CULVERT.
 6. REMOVE SPECIAL STILLING BASIN(S), AND COMPLETE ROADWAY.

 ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

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CULVERT CONSTRUCTION SEQUENCE STA. 52+50 -YALT-

1. INSTALL SPECIAL STILLING BASIN AS REQUIRED
2. INSTALL BYPASS PUMP AND HOSE AS REQUIRED
3. CONSTRUCT IMPERVIOUS DIKE, DIVERTING FLOW TO BYPASS PUMP
4. PHASE BYPASS PUMPING AS REQUIRED TO MAINTAIN TRAFFIC CONTROL
5. CONSTRUCT 72" RCP
6. REMOVE IMPERVIOUS DIKE, DIVERTING FLOW THROUGH CULVERT
7. CONSTRUCT AS MUCH OF THE INLET CHANNEL IMPROVEMENTS AND FLOOD BENCHES AS POSSIBLE



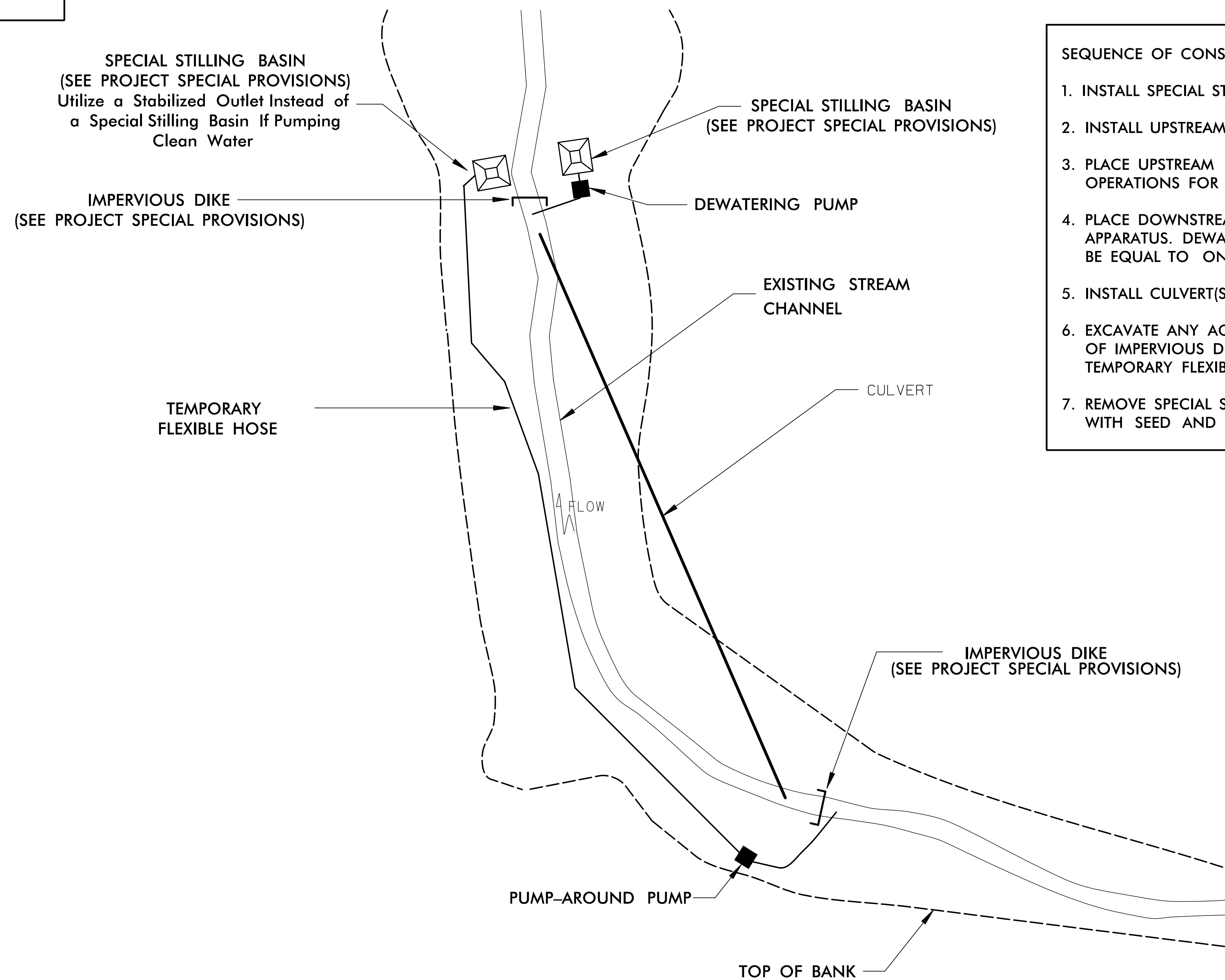
INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-10B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EXAMPLE OF PUMP-AROUND OPERATION

NOTES:

- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
- 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
- 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
- 4) Pumps and hoses shall be of sufficient size to dewater the work area.



SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

RW Revision 6/1/14 JCL

Added new Permanent Utility Easement (PUE) to Parcel 60, Converted Temporary Construction Easements (TCE) to PUE on Parcels 62, 66, 64 and 187, Converted PUE to TCE on Parcel 57.

8/17/99

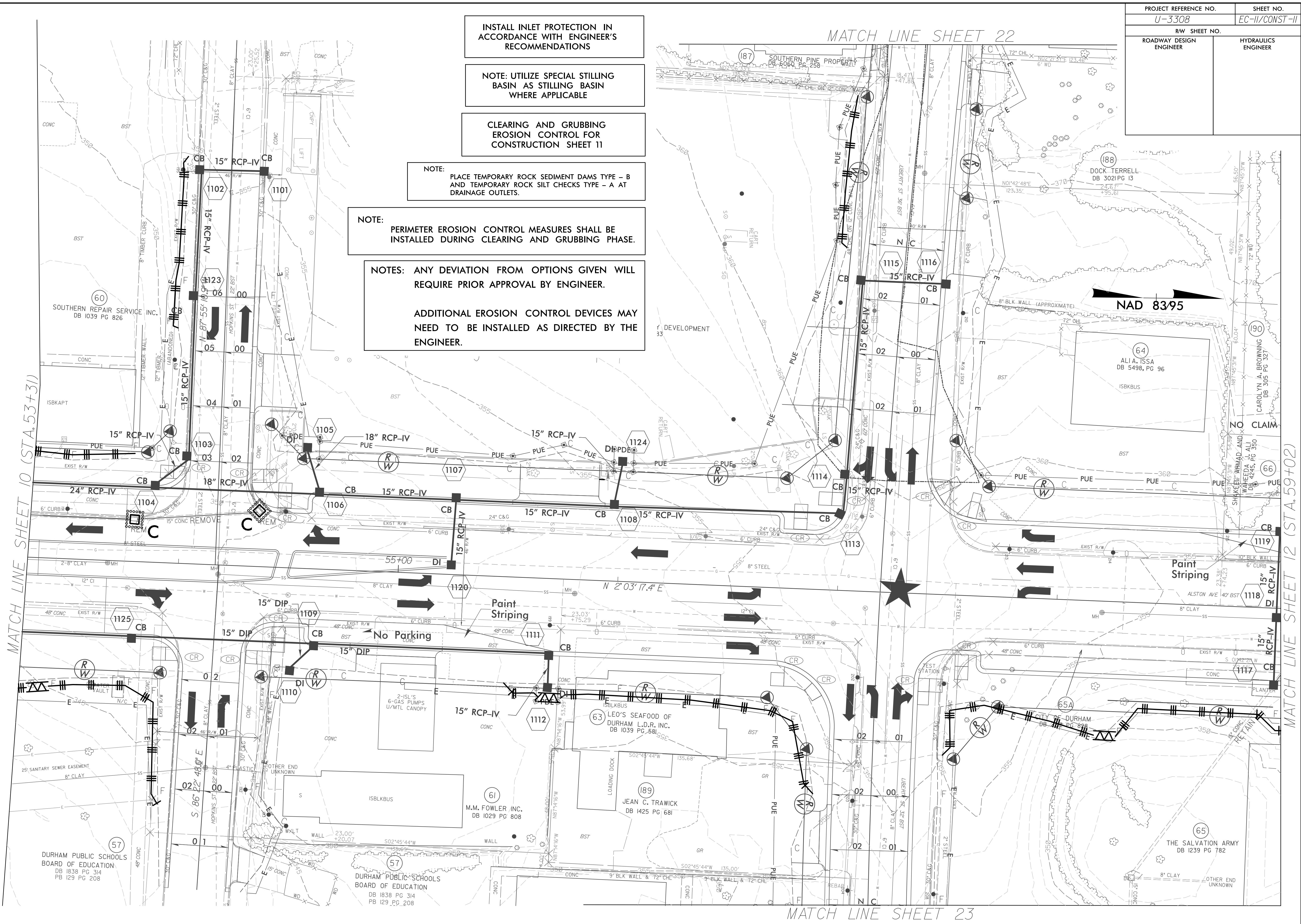
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enb00000

PROJECT REFERENCE NO.		SHEET NO.	
U-3308		EC-11/CONST-11	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

MATCH LINE SHEET 10 (STA. 53+31)

MATCH LINE SHEET 22

MATCH LINE SHEET 23



INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 11

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

NAD 8395

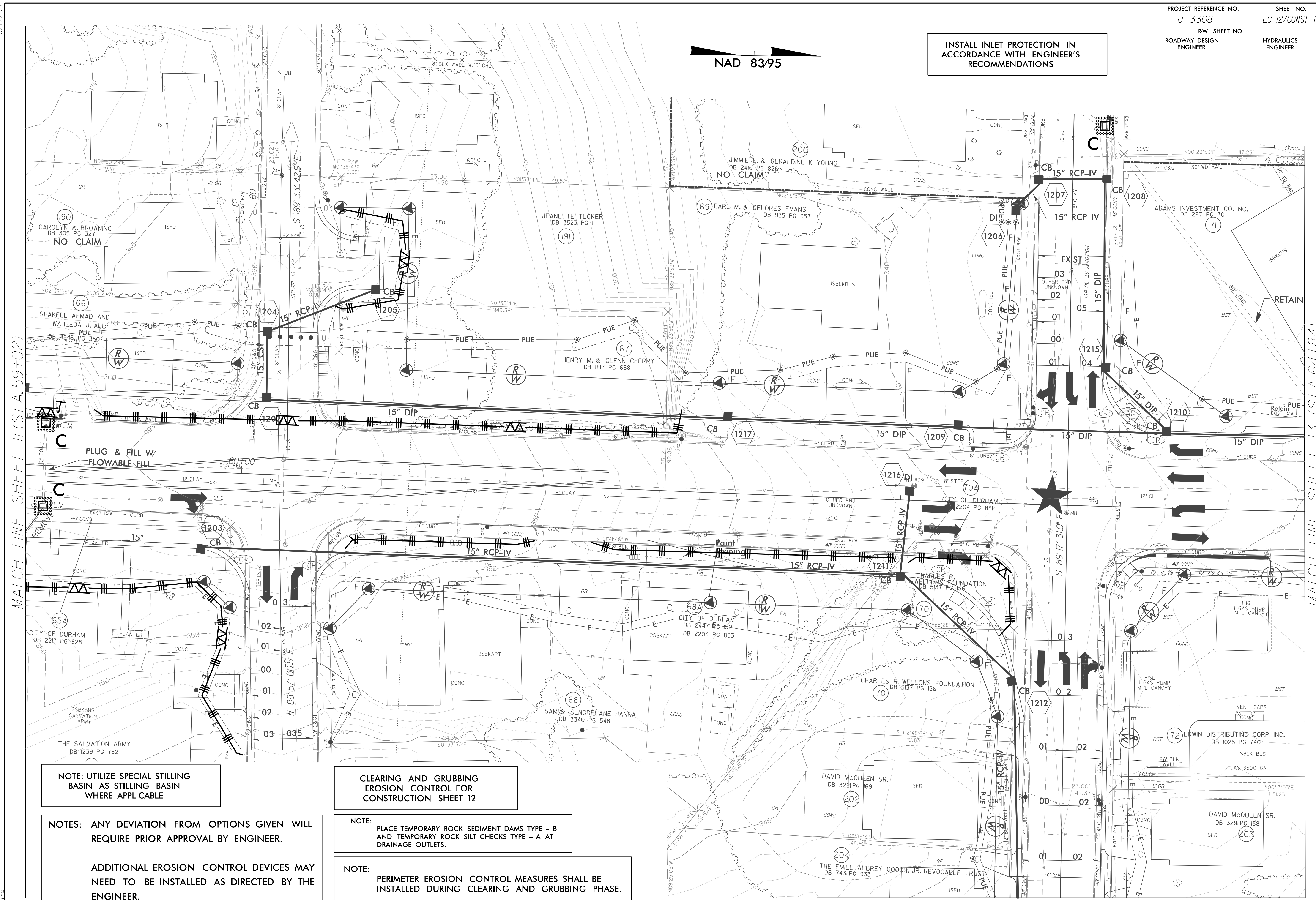
MATCH LINE SHEET 12 (STA. 59+02)

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-12/CONST-12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

R/W Revision 6/1/14 JCL
 Converted Temporary Construction Easement (TCE) to Permanent Utility Easement (PUE) on Parcels 66, 67, 69, 70, 71, 202 and 204.

NAD 83/95

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS



MATCH LINE SHEET 11 (STA. 59+02)

MATCH LINE SHEET 13 (STA. 64+84)

MATCH LINE SHEET 24

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 12

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

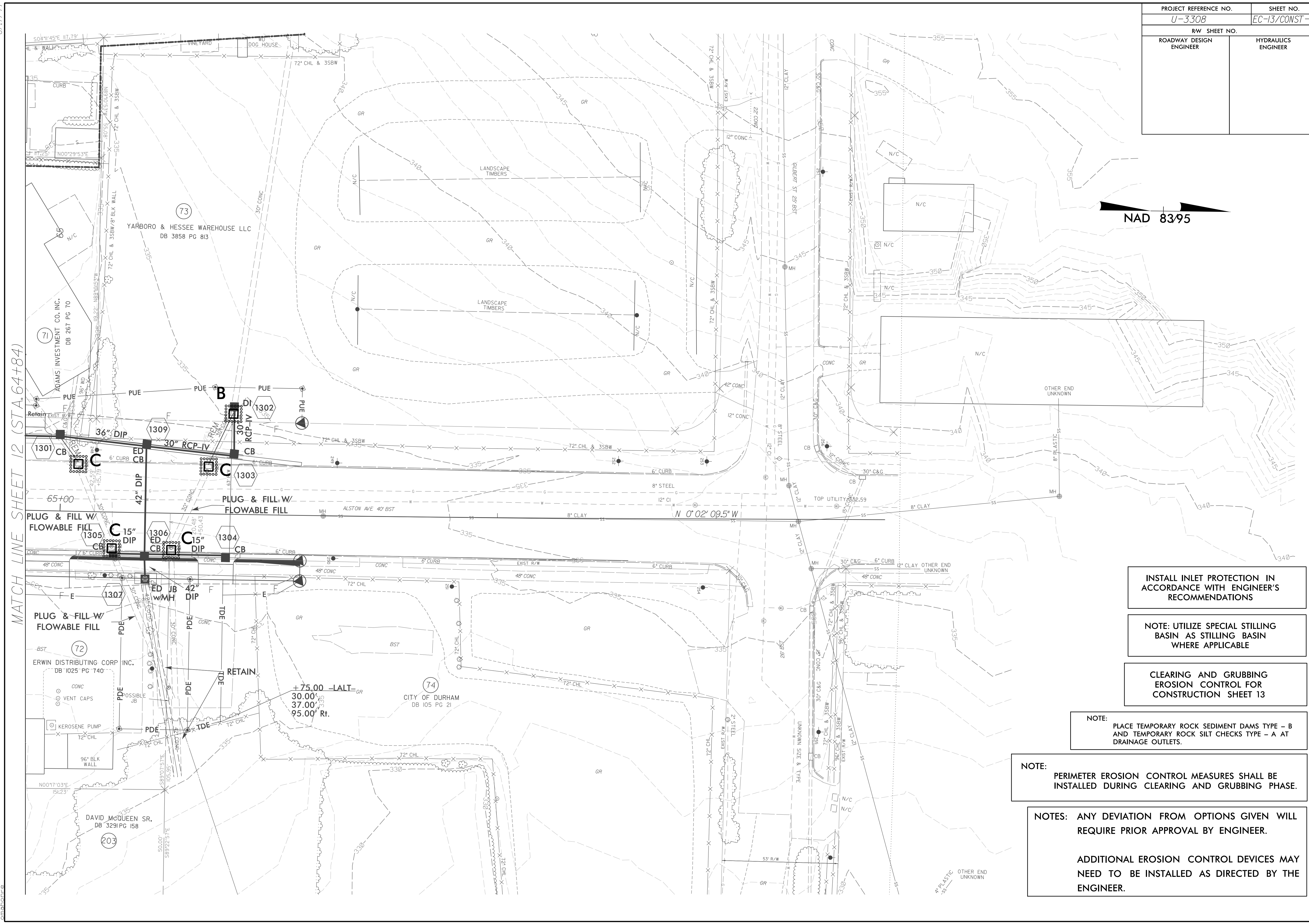
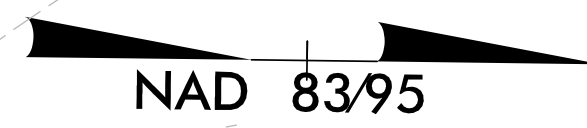
 ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

4/13/2015
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 8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-13/CONST-13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



RW Revision 12/09/13 JCL
 Added Contaminated Soil Symbols to
 Parcels 71 & 72

MATCH LINE SHEET 12 (STA. 64+84)

- INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS
- NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE
- CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 13

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

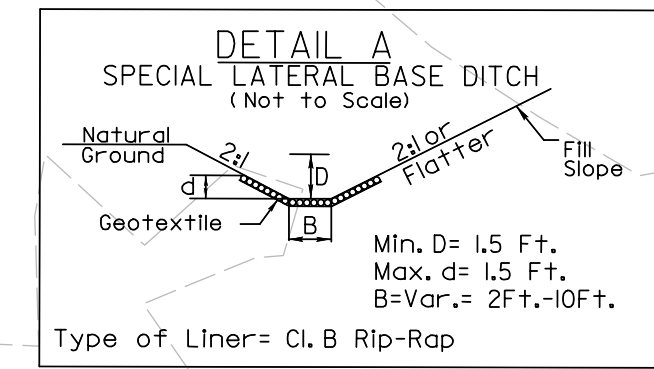
NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

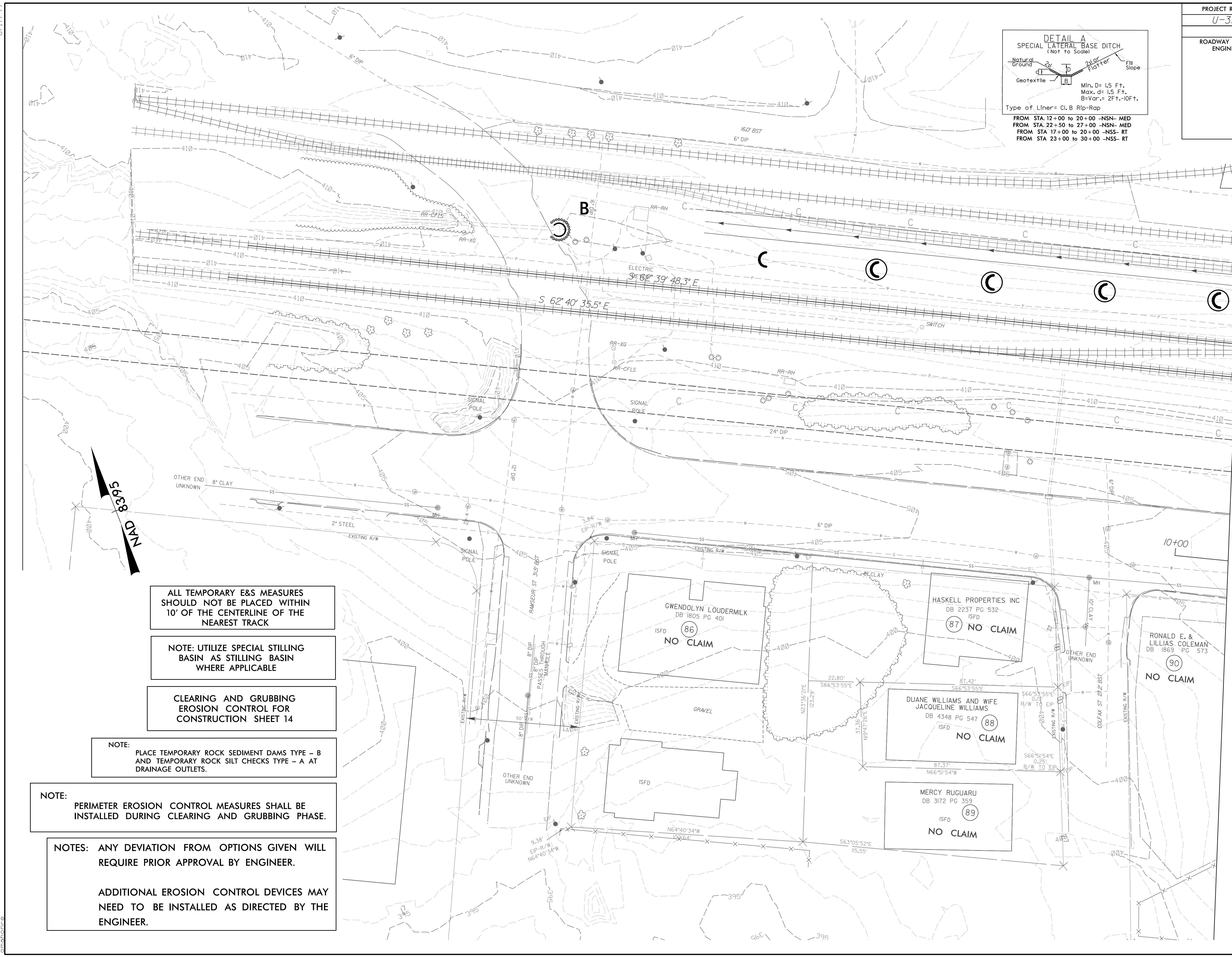
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 8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-14/CONST-14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Min. D= 1.5 Ft.
 Max. d= 1.5 Ft.
 B=Var.= 2ft.-10ft.
 Type of Liner= Cl. B Rip-Rap

FROM STA. 12+00 to 20+00 -NSN- MED
 FROM STA. 22+50 to 27+00 -NSN- MED
 FROM STA. 17+00 to 20+00 -NSS- RT
 FROM STA. 23+00 to 30+00 -NSS- RT



ALL TEMPORARY E&S MEASURES SHOULD NOT BE PLACED WITHIN 10' OF THE CENTERLINE OF THE NEAREST TRACK

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 14

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.
 ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

MATCH LINE SHEET 15

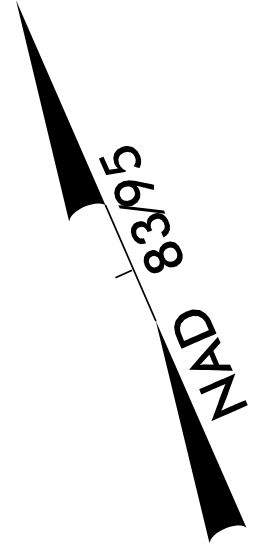
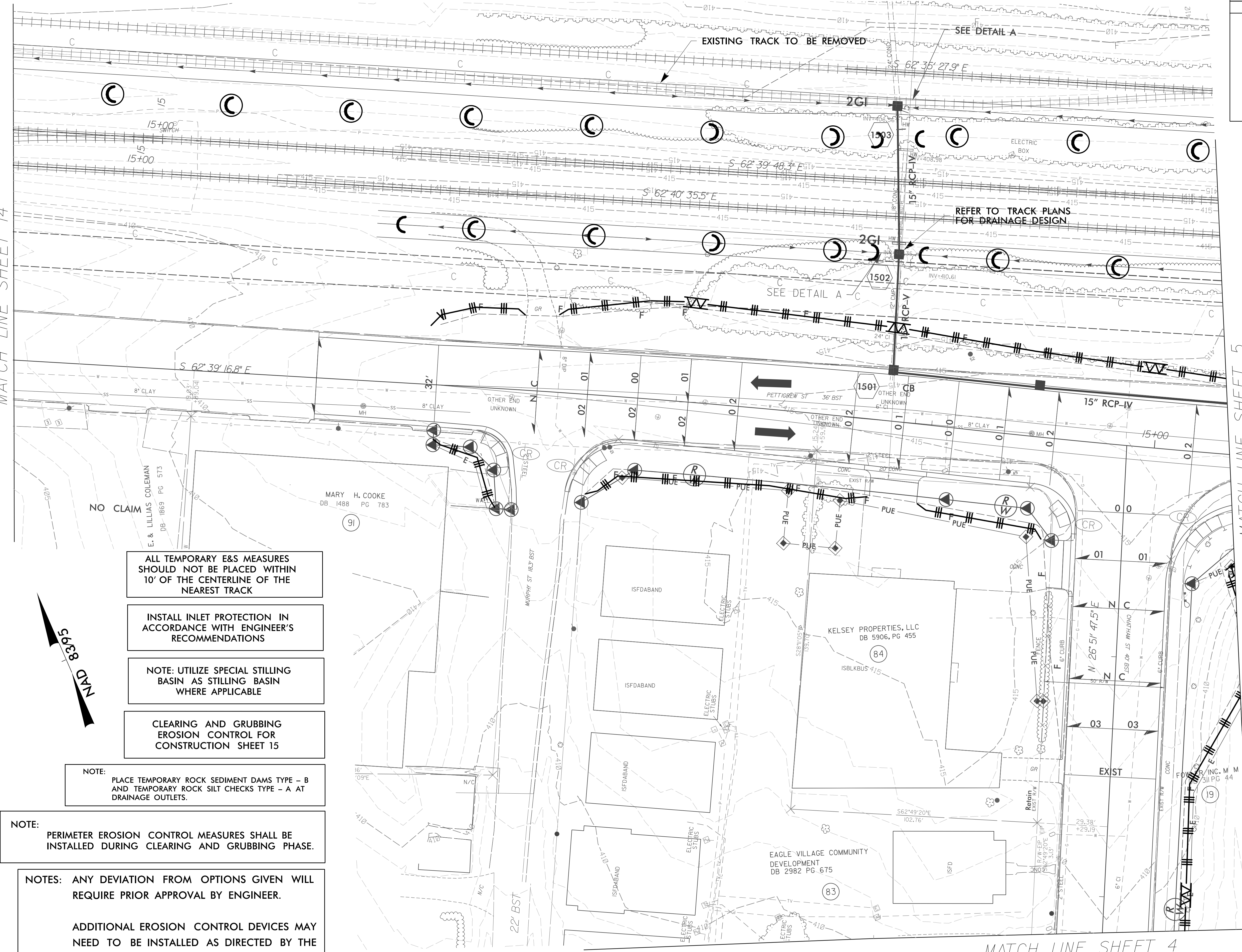
8/17/99
 4/13/2015
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PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-15/CONST-15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

RW Revision 6/1/14 JCL
 Converted Temporary Construction Easement (TCE) to Permanent Utility Easement (PUE) on Parcels 83 and 84.
 Added new PUE to Parcels 19, 83 and 84

MATCH LINE SHEET 14

MATCH LINE SHEET 5



ALL TEMPORARY E&S MEASURES SHOULD NOT BE PLACED WITHIN 10' OF THE CENTERLINE OF THE NEAREST TRACK

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 15

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

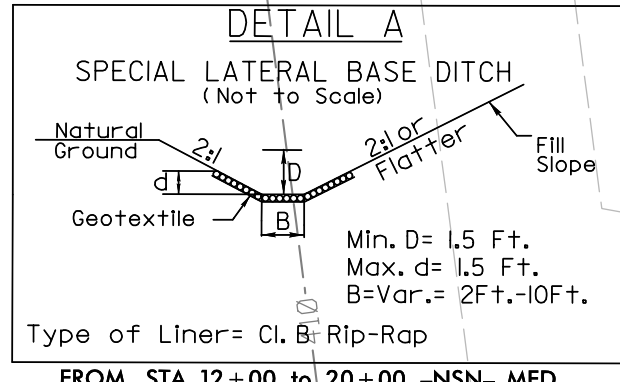
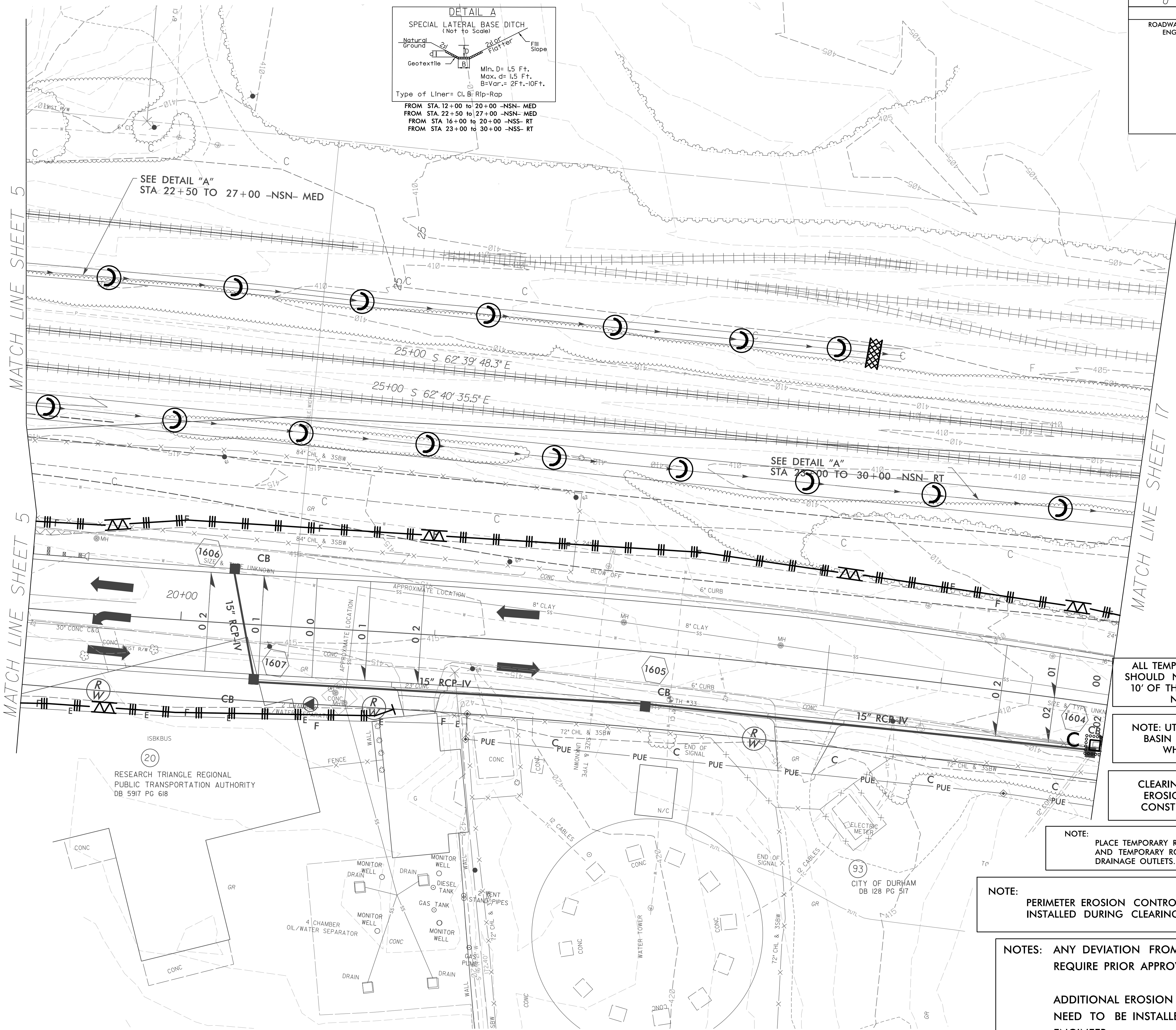
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

MATCH LINE SHEET 4

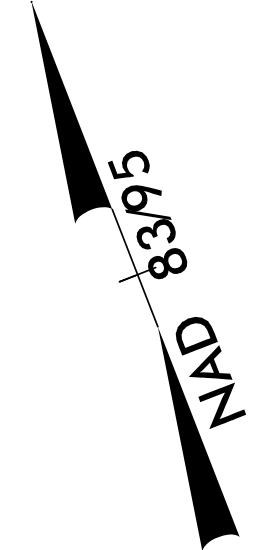
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4/13/2015
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RW Revision 6/1/14 JCL
 Removed Permanent Utility Easement (PUE) from Parcel 20.

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-16/CONST-16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



FROM STA. 12+00 TO 20+00 -NSN- MED
 FROM STA. 22+50 TO 27+00 -NSN- MED
 FROM STA. 16+00 TO 20+00 -NSS- RT
 FROM STA. 23+00 TO 30+00 -NSS- RT



ALL TEMPORARY E&S MEASURES SHOULD NOT BE PLACED WITHIN 10' OF THE CENTERLINE OF THE NEAREST TRACK

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 16

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

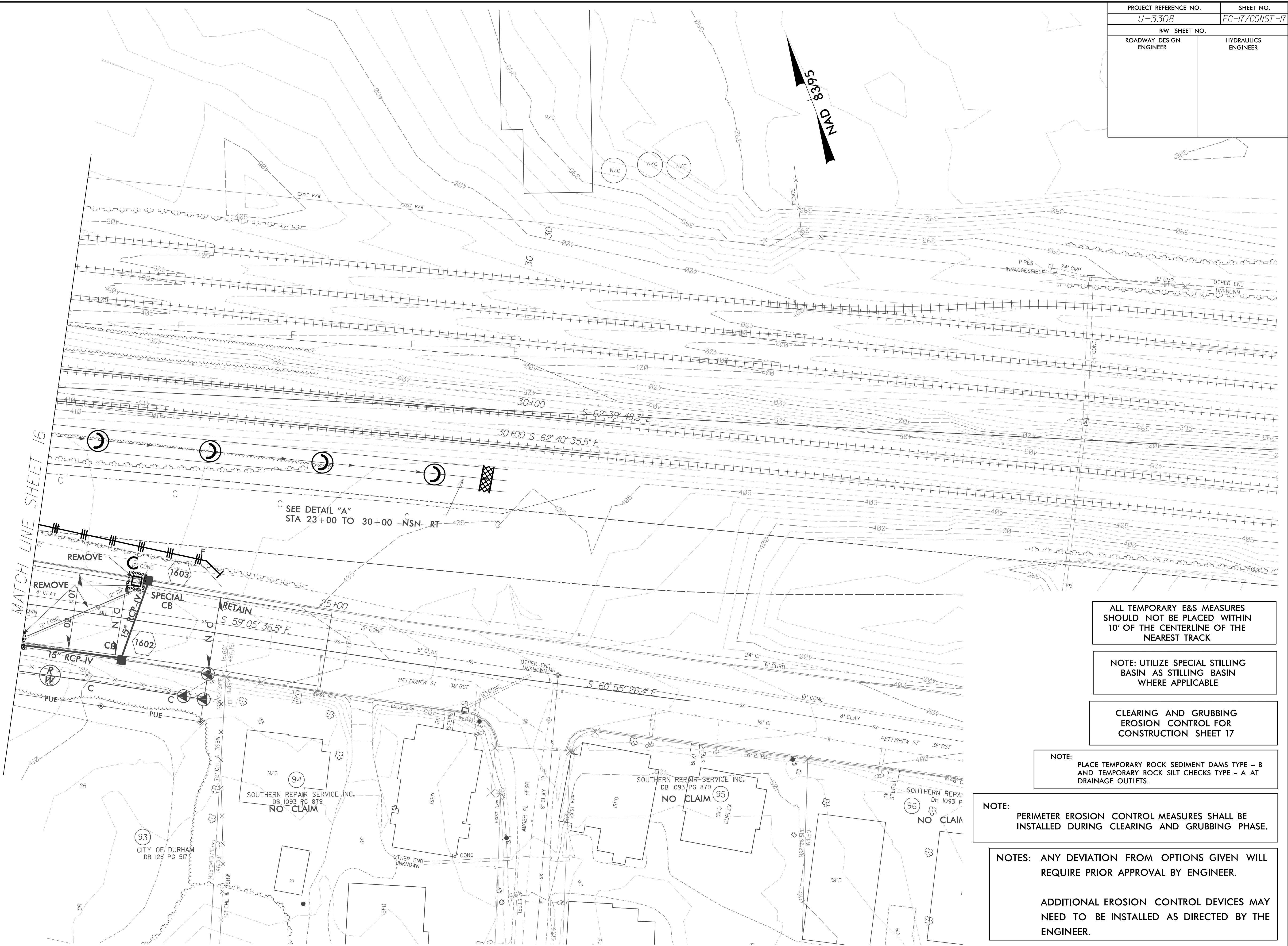
NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

8/17/99
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PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-17/CONST-17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ALL TEMPORARY E&S MEASURES SHOULD NOT BE PLACED WITHIN 10' OF THE CENTERLINE OF THE NEAREST TRACK

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 17

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

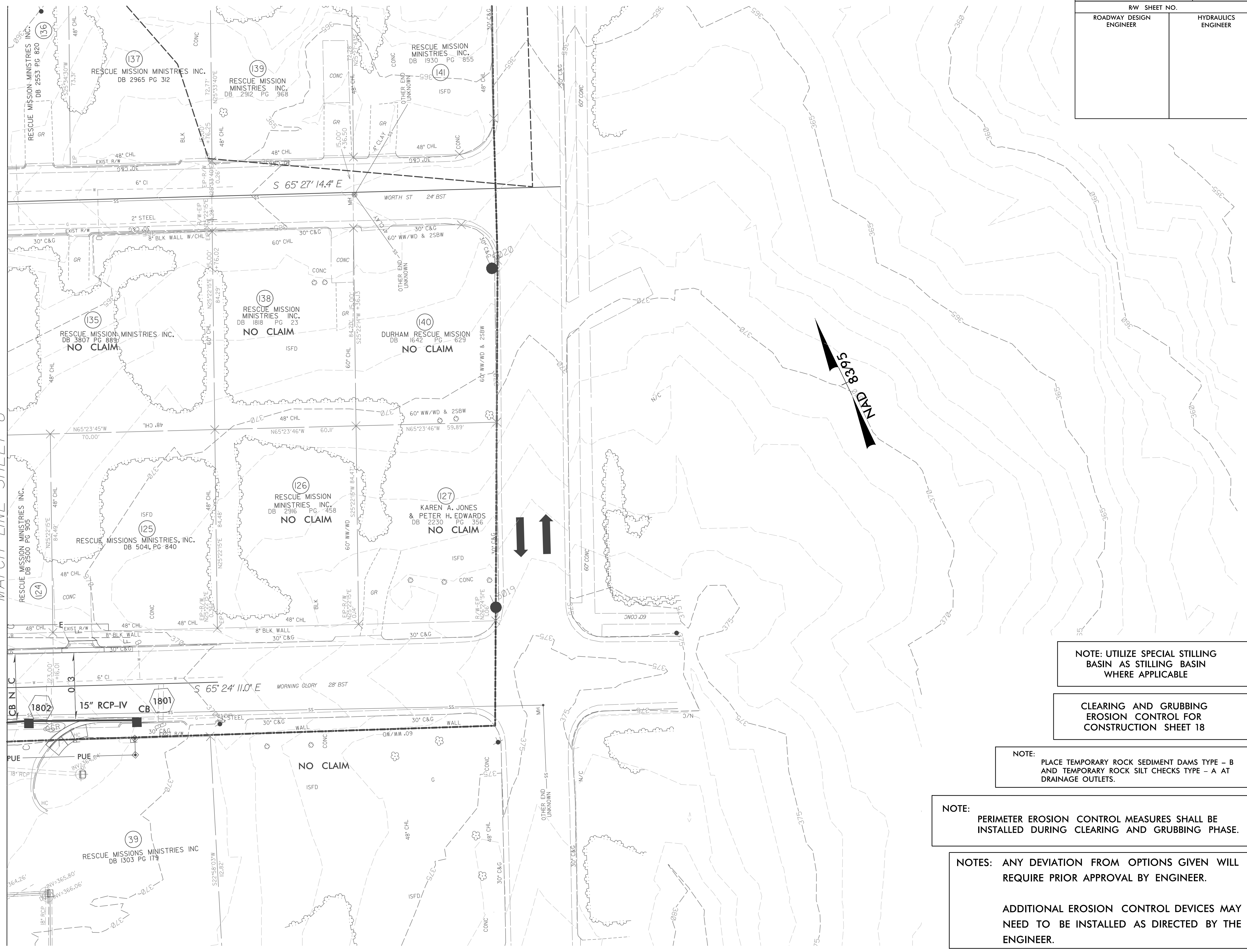
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

8/17/99
 4/13/2015
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R/W Revision 1209/13 JCL
 Changed Property Owner Name and Deed Information on Parcel 125

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-18/CONST-18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH LINE SHEET 8



NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 18

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

 ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

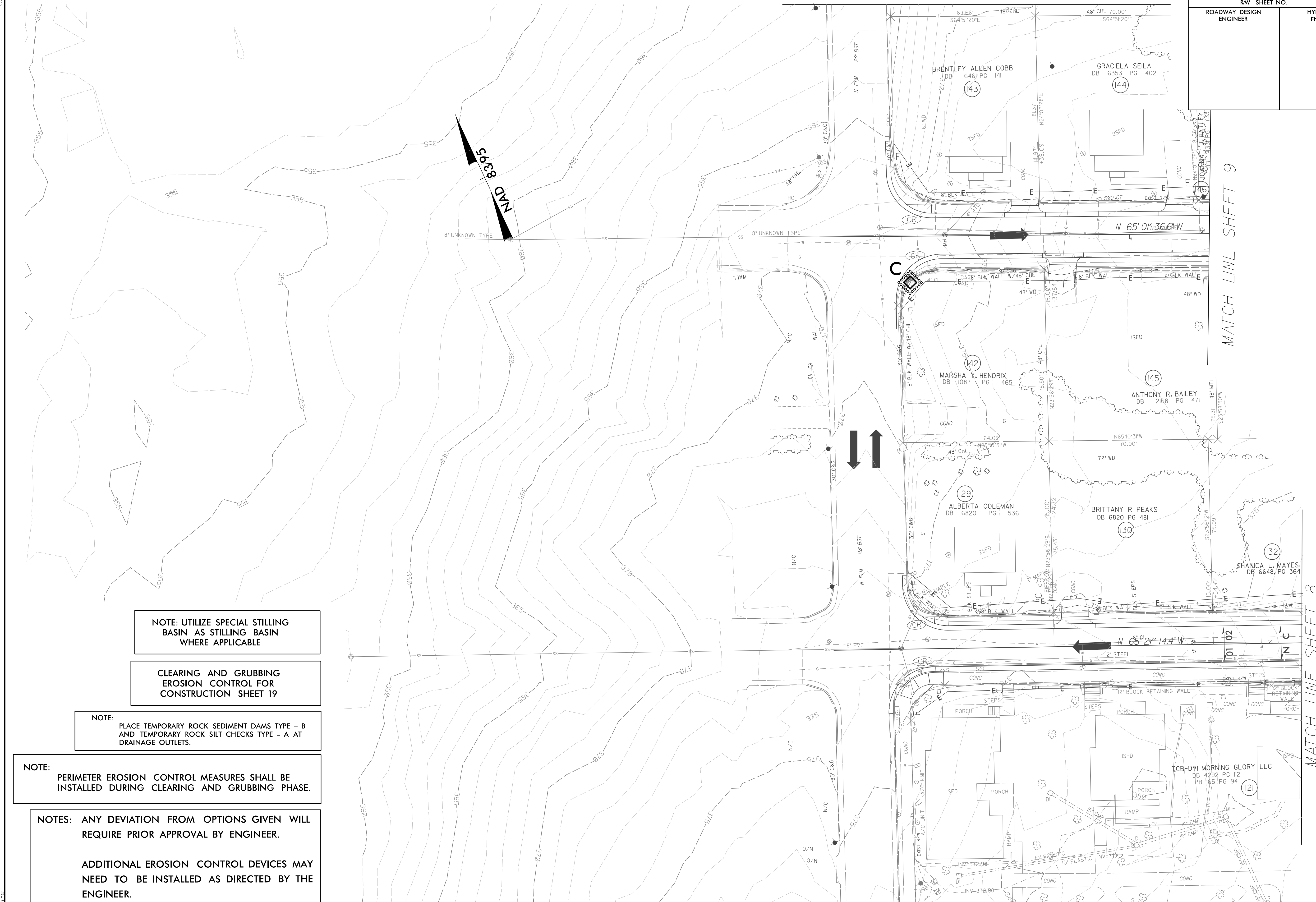
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RW Revision 331/14 JCL
Parcel # 158 Property Lines Updated

8/17/99
4/13/2015
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MATCH LINE SHEET 21

PROJECT REFERENCE NO.		SHEET NO.	
U-3308		EC-19/CONST-19	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 19

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

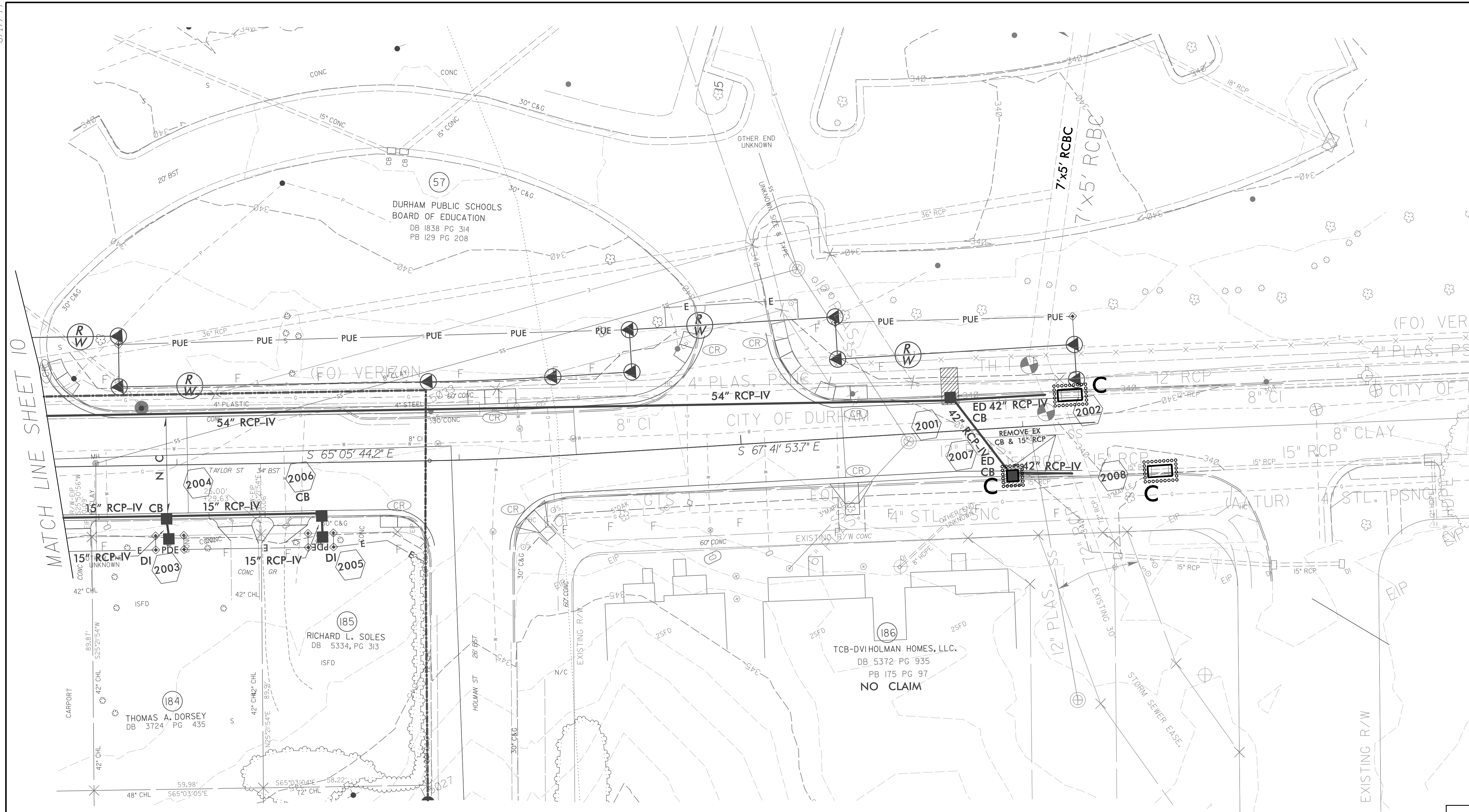
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

MATCH LINE SHEET 9

MATCH LINE SHEET 8

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-20/CONST-20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



RW Revision 12/09/13 JCL
 Changed Property Owner Name and Deed Information on Parcel 185

4/13/2015
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NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

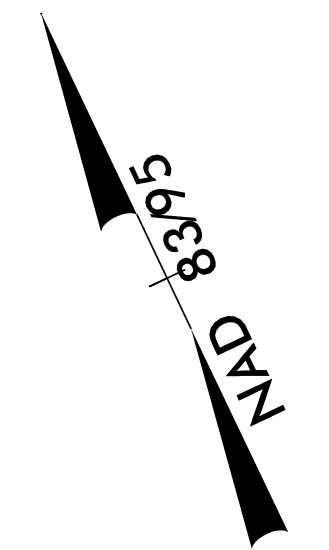
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 20

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

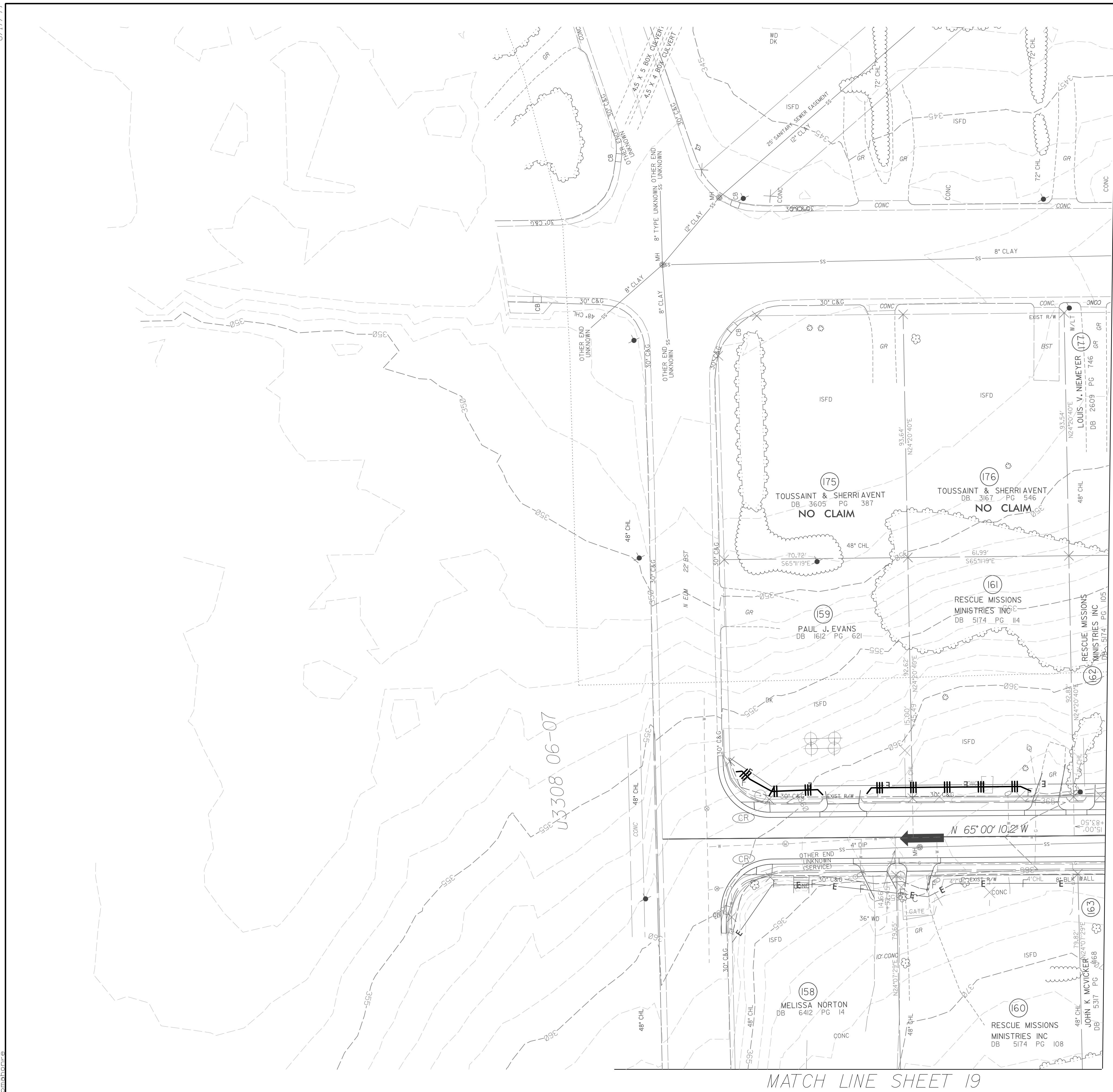
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



RW Revision 33114 JCL
Parcel # 158 Property Lines Updated

8/17/99
4/13/2015
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PROJECT REFERENCE NO. U-3308	SHEET NO. EC-21/CONST-21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCH LINE SHEET 9

MATCH LINE SHEET 19

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 21

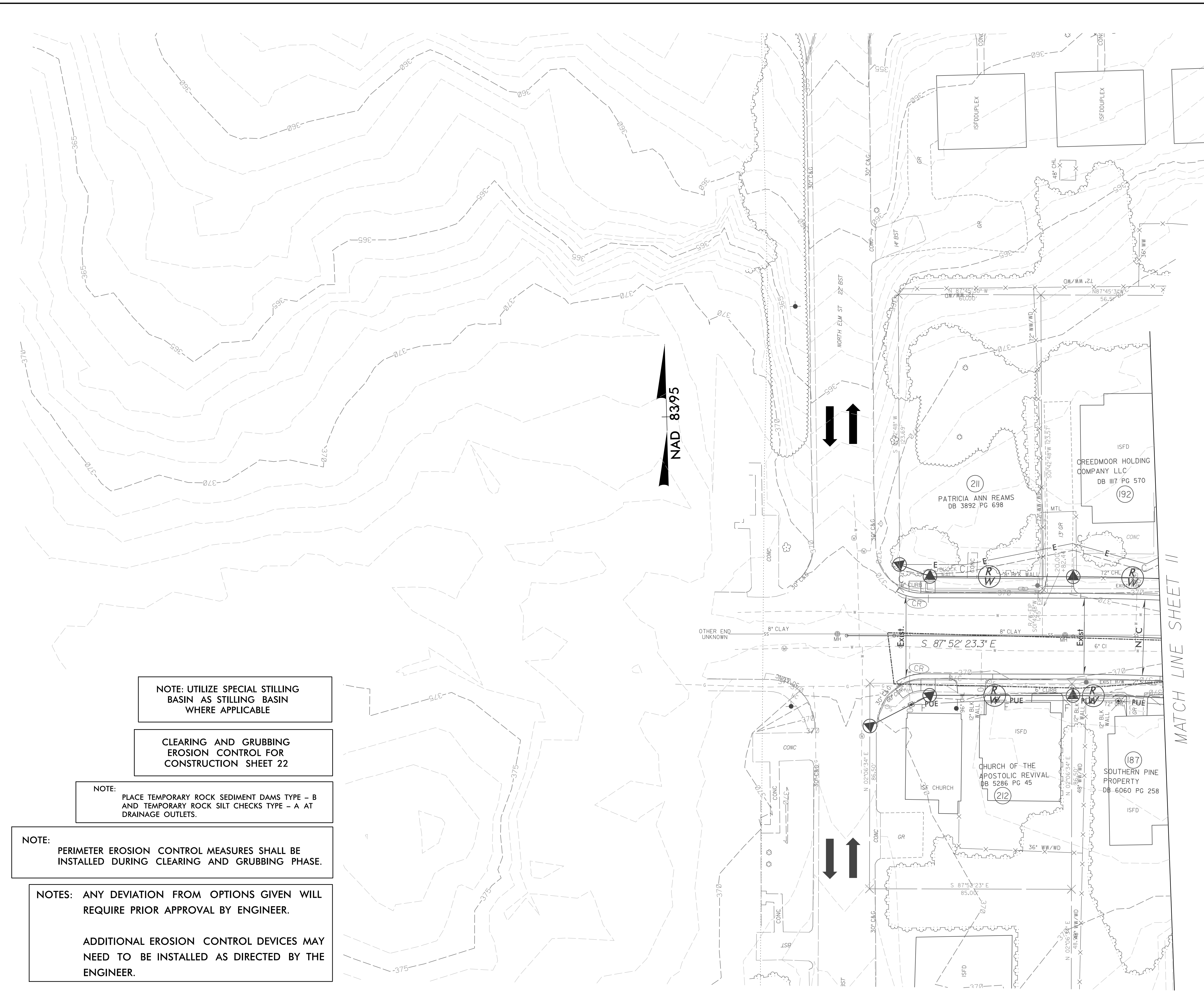
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

4/13/2015
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 8/17/99



- NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE
- CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 22
- NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.
- NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.
- NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.
- ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

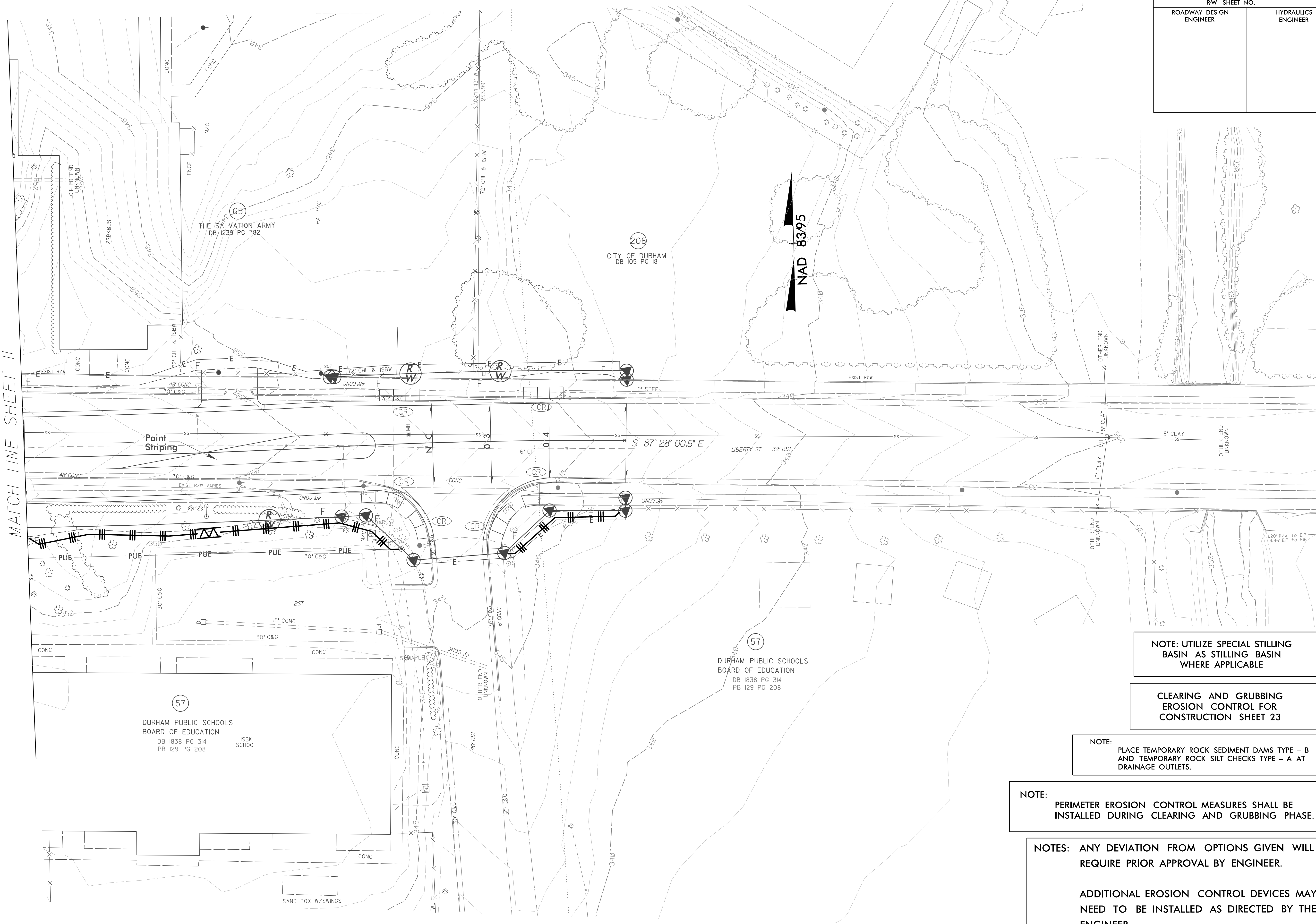
PROJECT REFERENCE NO. U-3308	SHEET NO. EC-22/CONST-22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH LINE SHEET 11

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-23/CONST-23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

R/W Revision 4/15/14 JCL
Adjusted Existing R/W Line on Parcels 65 and 208

MATCH LINE SHEET II



NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 23

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

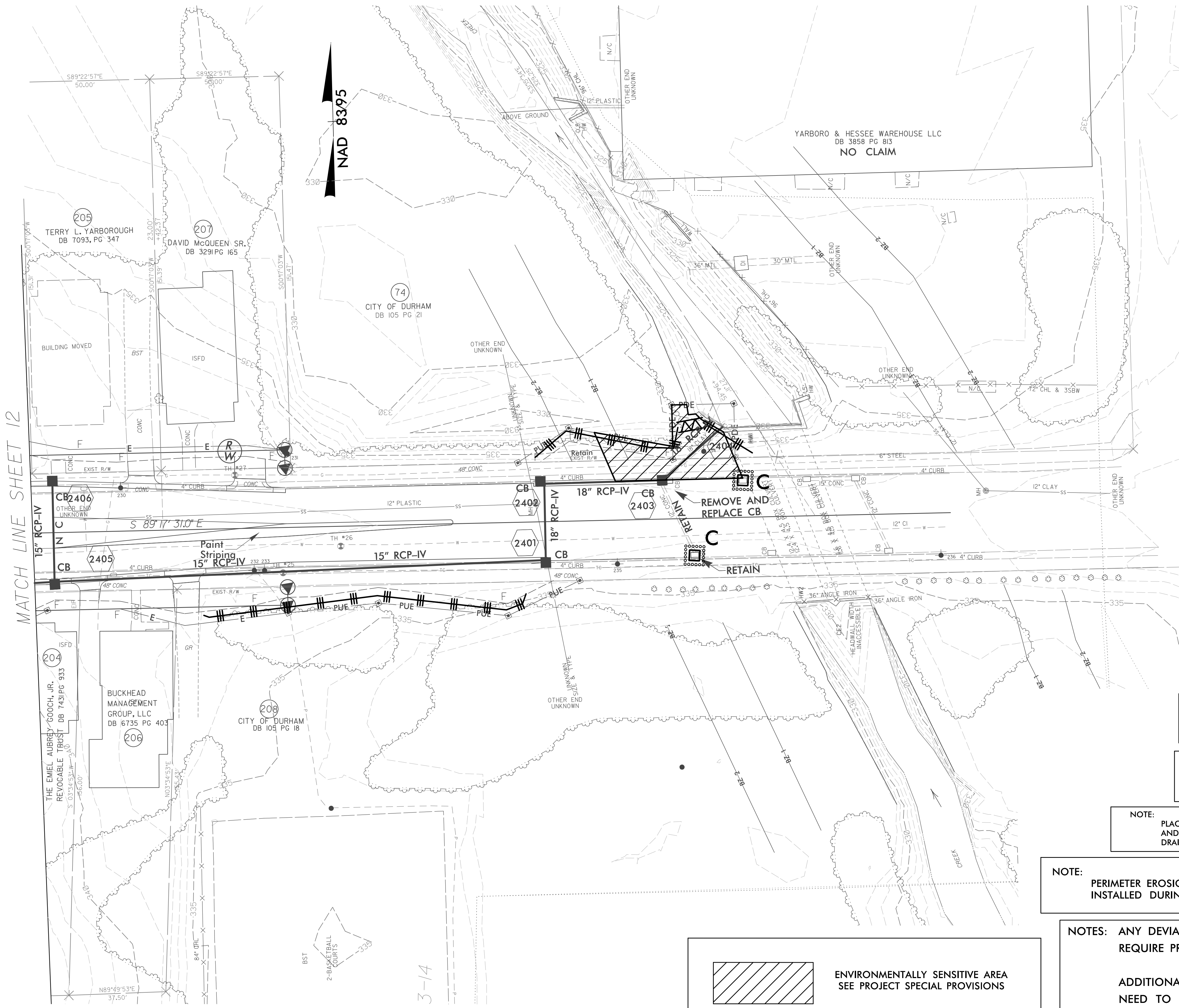
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

8/17/99
4/13/2015
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PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-24/CONST-24
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH LINE SHEET 12



NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 24

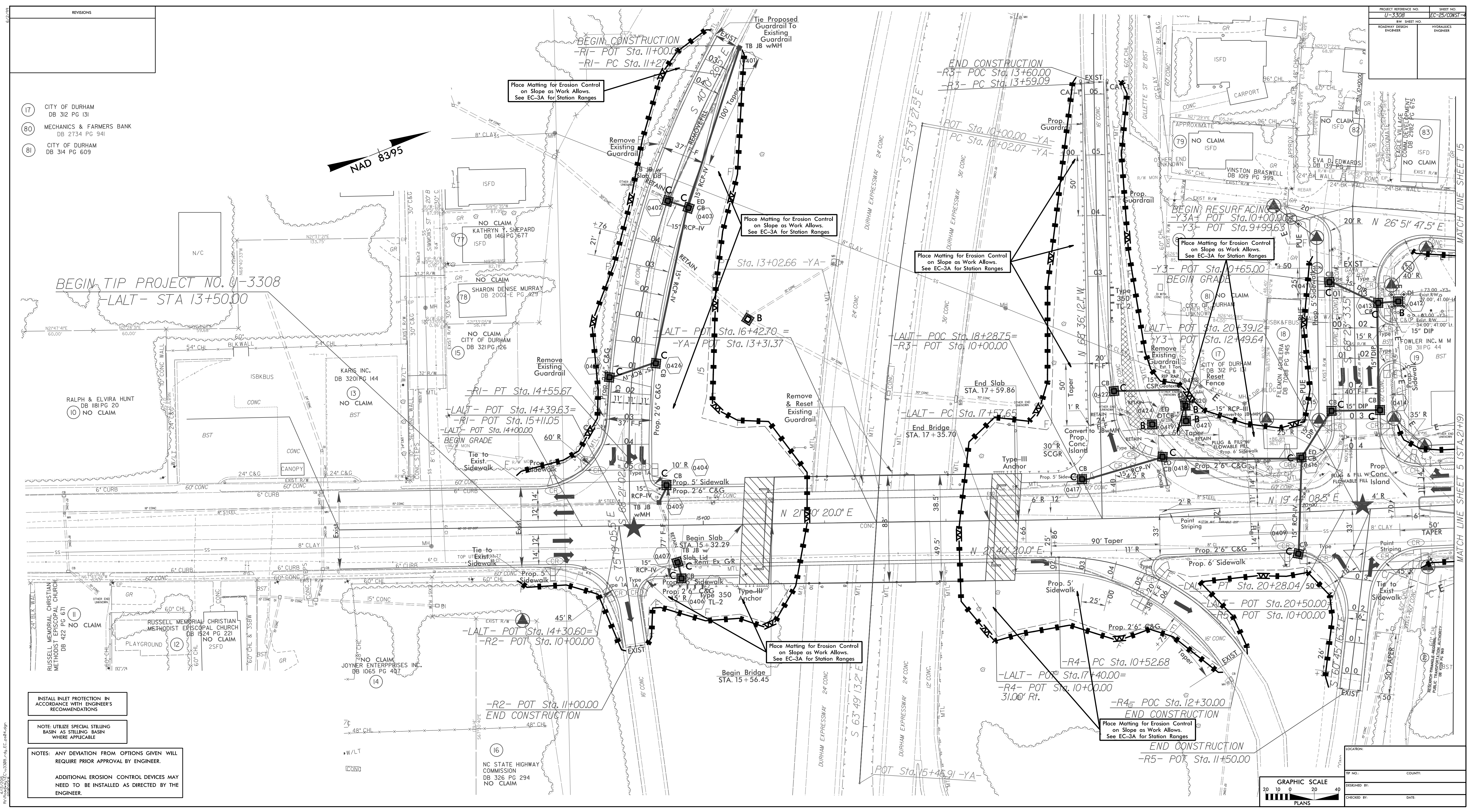
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.
 ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

8/17/99
 4/13/2015
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REVISIONS	

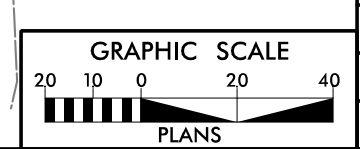
- (17) CITY OF DURHAM
DB 312 PG 131
- (80) MECHANICS & FARMERS BANK
DB 2734 PG 941
- (81) CITY OF DURHAM
DB 314 PG 609

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



PROJECT REFERENCE NO. 17-3308	SHEET NO. EC-25/CONV-4
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	DATE

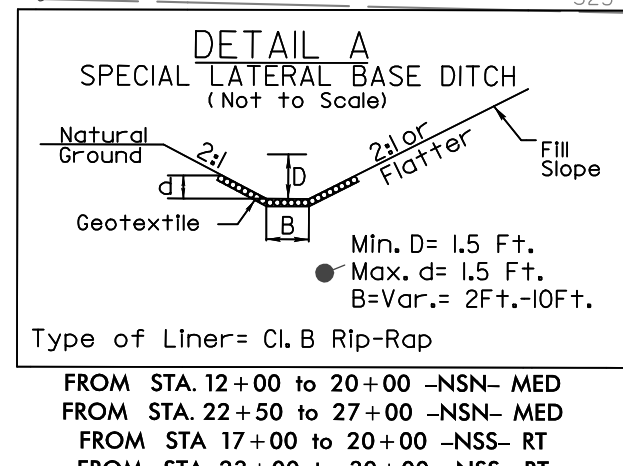
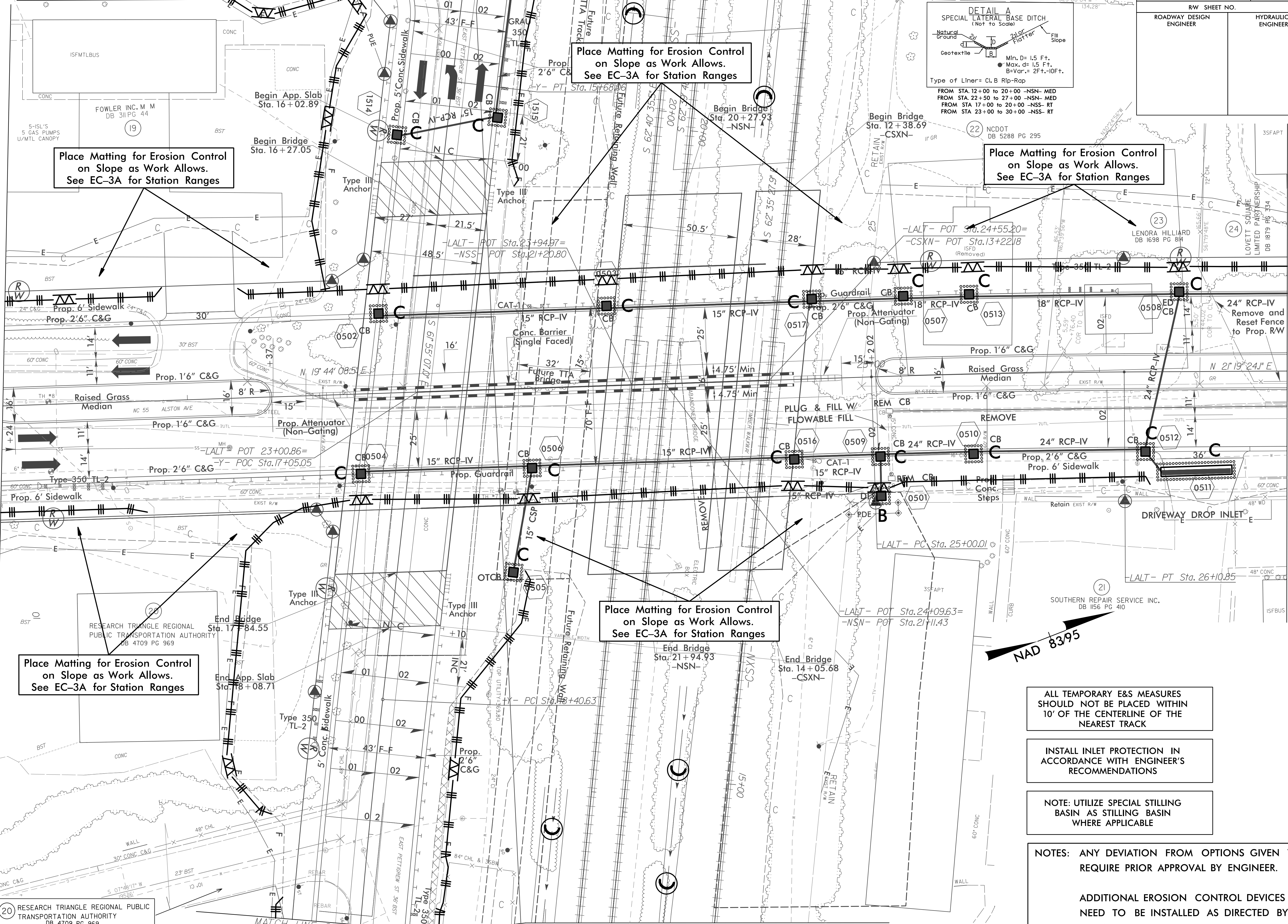
RW Revision 5/7/14 JCI Existing Property Lines, Proposed Right of Way and Temporary Construction Lines Adjusted on Parcel 20

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-26/CONST-5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH LINE SHEET 15

MATCH LINE SHEET 4 (STA. 21+19)

MATCH LINE SHEET 6 (STA. 26+82)



Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

ALL TEMPORARY E&S MEASURES SHOULD NOT BE PLACED WITHIN 10' OF THE CENTERLINE OF THE NEAREST TRACK

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

RW Revision 6/1/14 JCL
Removed Permanent Utility Easement (PUE) from Parcel 20, Added PUE to Parcel 19

4/13/2015
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20 RESEARCH TRIANGLE REGIONAL PUBLIC TRANSPORTATION AUTHORITY DB 4709 PG 969

MATCH LINE SHEET 16

MATCH LINE SHEET 16

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-27/CONST-6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

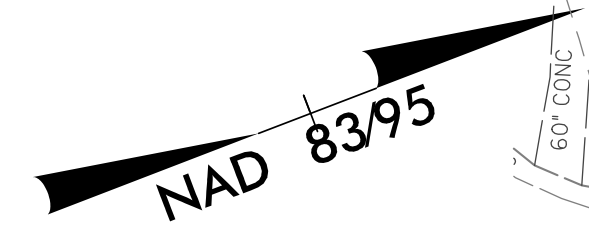
INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

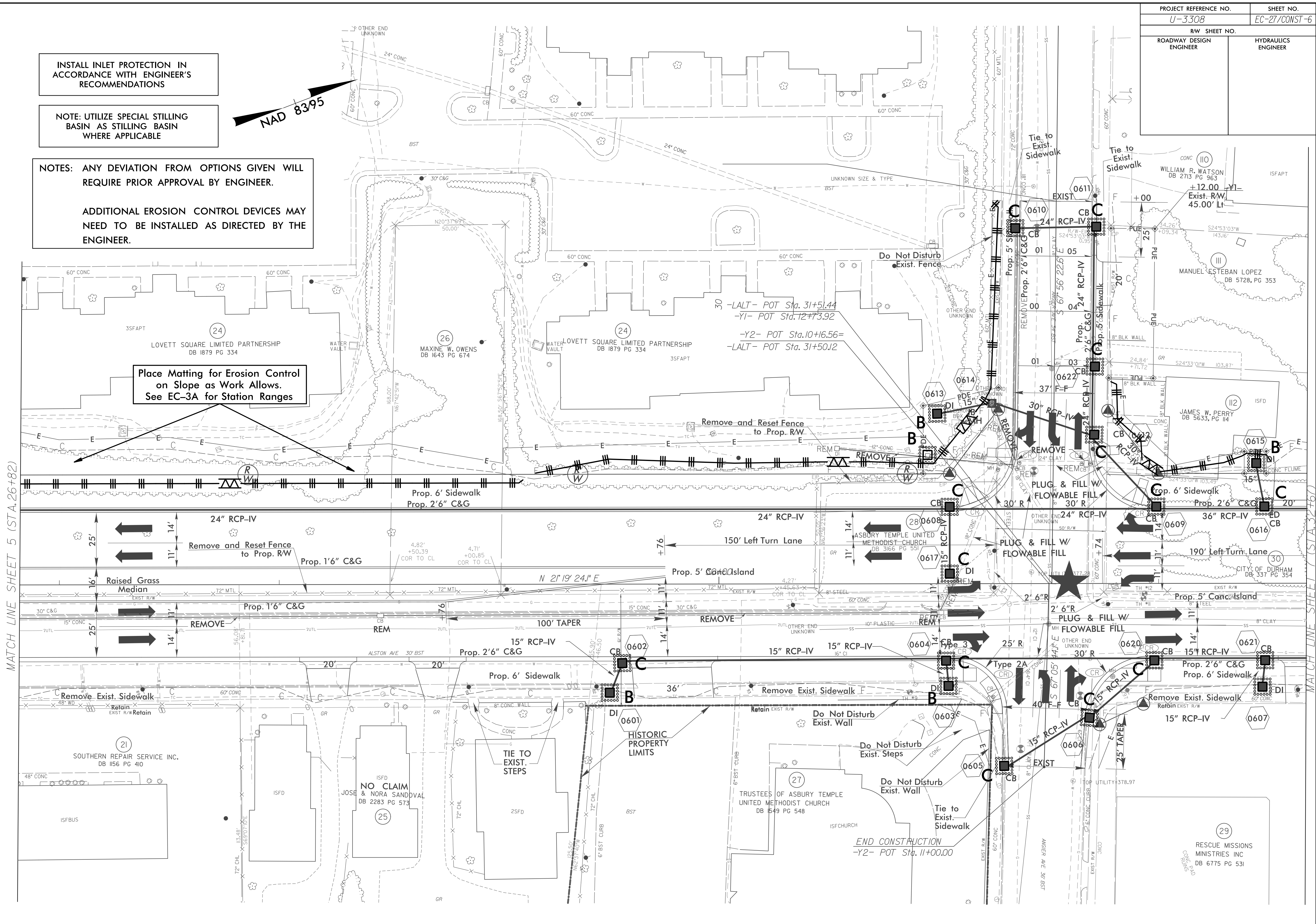
Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges



RW REVISION 6/1/14 JCL
Converted Permanent Utility Easement (PUE) to Temporary Construction Easement (TCE) and Adjusted PDE on Parcel 24

MATCH LINE SHEET 5 (STA. 26+82)

MATCH LINE SHEET 7 (STA. 32+76)



4/13/2015
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ec0606

END CONSTRUCTION
-Y2- POT Sta. 11+00.00

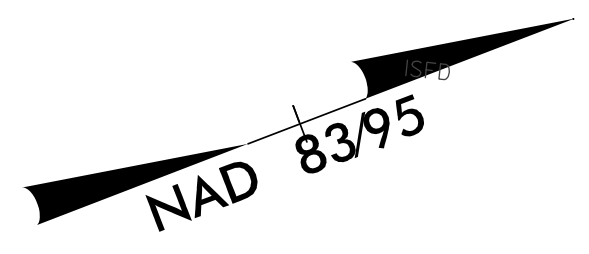
PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-28/CONST-7
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

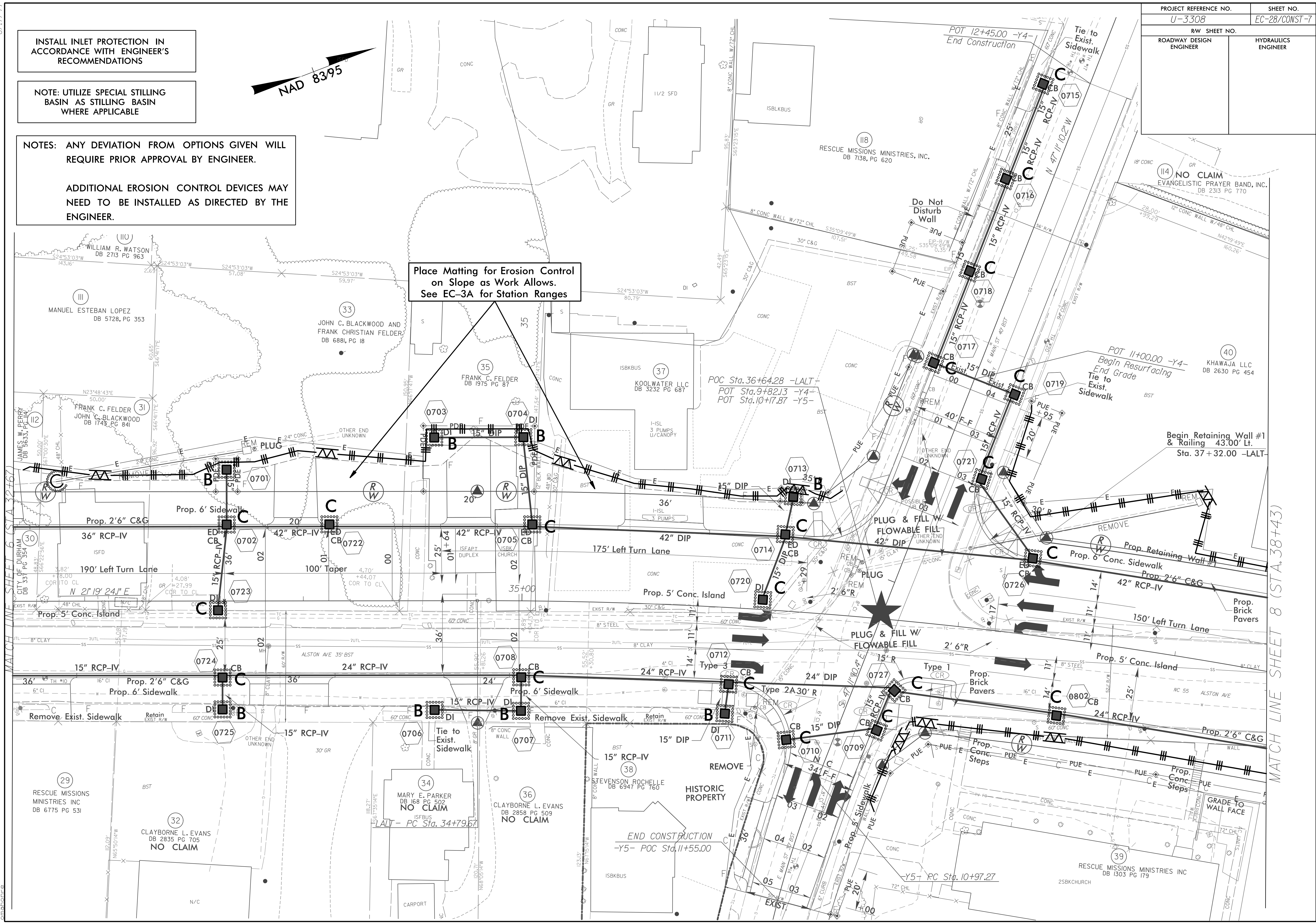
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

RW Revision 6/1/14 JCL
Added Permanent Utility Easement (PUE) and Adjusted Temporary Construction Easements (TCE) on Parcels 37 and 118



4/13/2015
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c:\p07\ec-28

MATCH LINE SHEET 8 (STA. 38+43)

8.17/99

R/W Revision 33114 JCL
 Added Prop. 12' Driveway on Parcel 46 Off of Worth St.

8/17/99

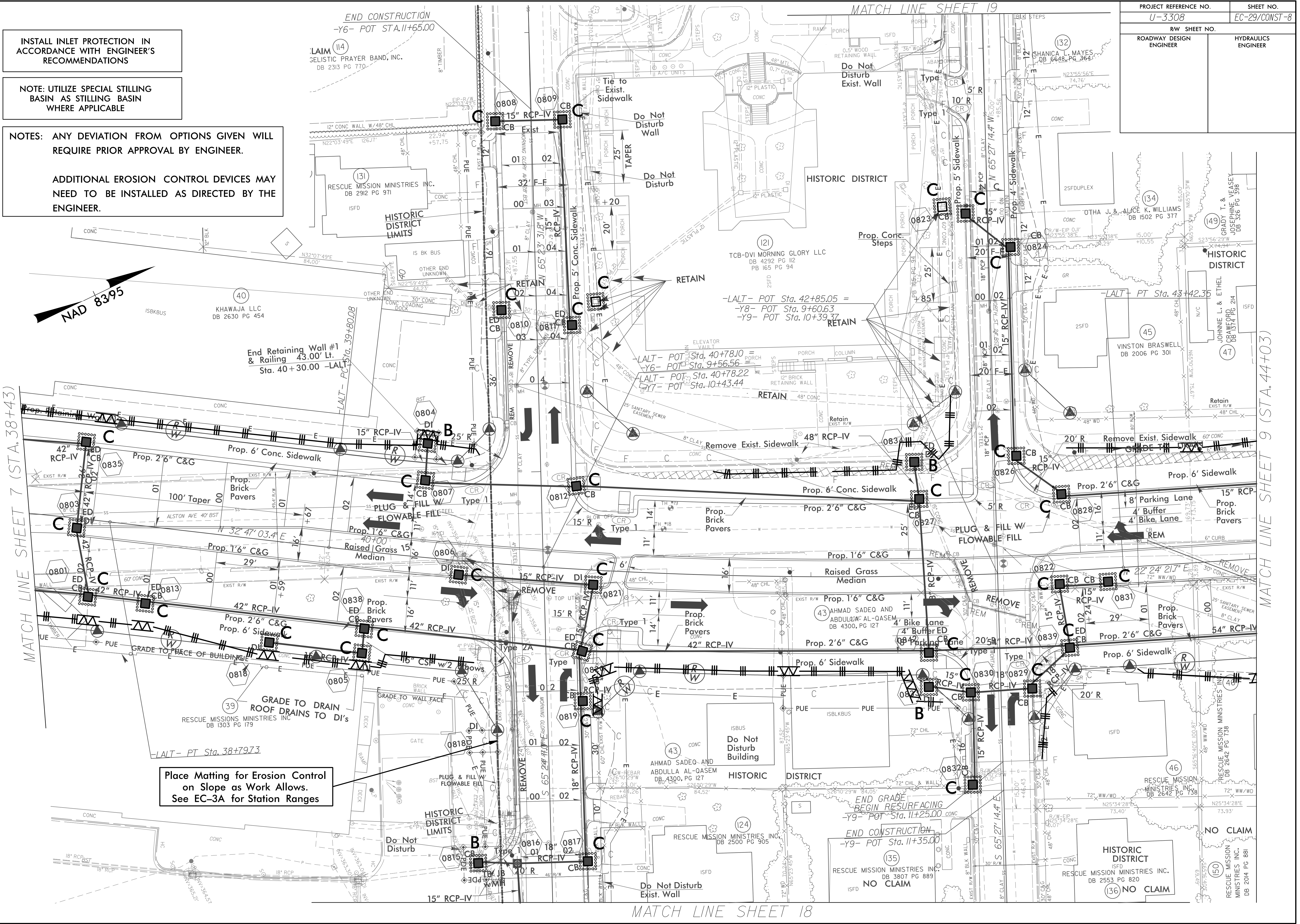
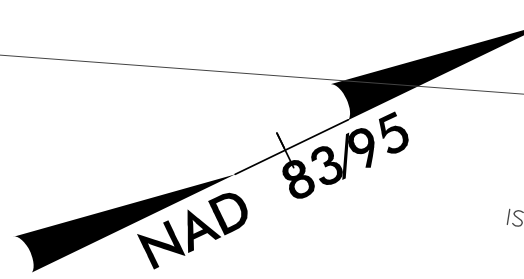
4/13/2015
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 on:06/06/2015

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-29/CONST-8
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

MATCH LINE SHEET 19

MATCH LINE SHEET 7 (STA. 38+43)

MATCH LINE SHEET 9 (STA. 44+03)

MATCH LINE SHEET 18

END CONSTRUCTION
 -Y6- POT Sta. 11+65.00

END CONSTRUCTION
 -Y9- POT Sta. 11+35.00

BEGIN RESURFACING
 -Y9- POT Sta. 11+25.00

End Retaining Wall #1 & Railing 43.00' Lt. Sta. 40+30.00 -LALT-

-LALT- POT Sta. 40+78.10
 -Y8- POT Sta. 9+56.56
 -LALT- POT Sta. 40+78.22
 -Y7- POT Sta. 10+43.44

-LALT- PT Sta. 43+42.35

-LALT- PT Sta. 38+79.73

LAIM (14)
 GELISTIC PRAYER BAND, INC.
 DB 2313 PG 770

(131)
 RESCUE MISSION MINISTRIES INC.
 DB 2912 PG 971

(40)
 KHAWAJA LLC
 DB 2630 PG 454

(121)
 TCB-DVI MORNING GLORY LLC
 DB 4292 PG 112
 PB 165 PG 94

(132)
 SHANICA L. MAYES
 DB 6648 PG 364

(134)
 OTHA J. & ALICE K. WILLIAMS
 DB 1502 PG 377

(149)
 GRADY T. & JOSEPHINE VEASEY
 DB 326 PG 398

(45)
 WINSTON BRASWELL
 DB 2006 PG 301

(47)
 JOHNNIE L. & ETHEL GRAMFORD
 DB 1314 PG 214

(39)
 RESCUE MISSIONS MINISTRIES INC
 DB 1303 PG 179

(43)
 AHMAD SADEQ AND ABDULLA AL-QASEM
 DB 4300, PG 127

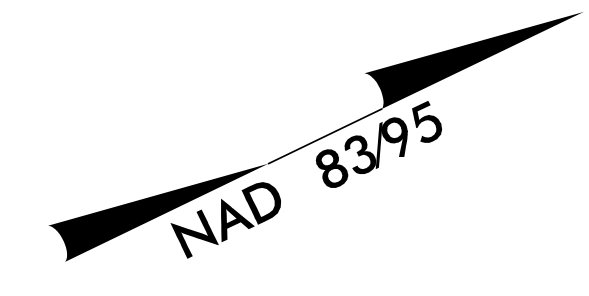
(46)
 RESCUE MISSION MINISTRIES INC
 DB 2642 PG 738

(135)
 RESCUE MISSION MINISTRIES INC.
 DB 3807 PG 889
 NO CLAIM

(136)
 RESCUE MISSION MINISTRIES INC.
 DB 2553 PG 820
 NO CLAIM

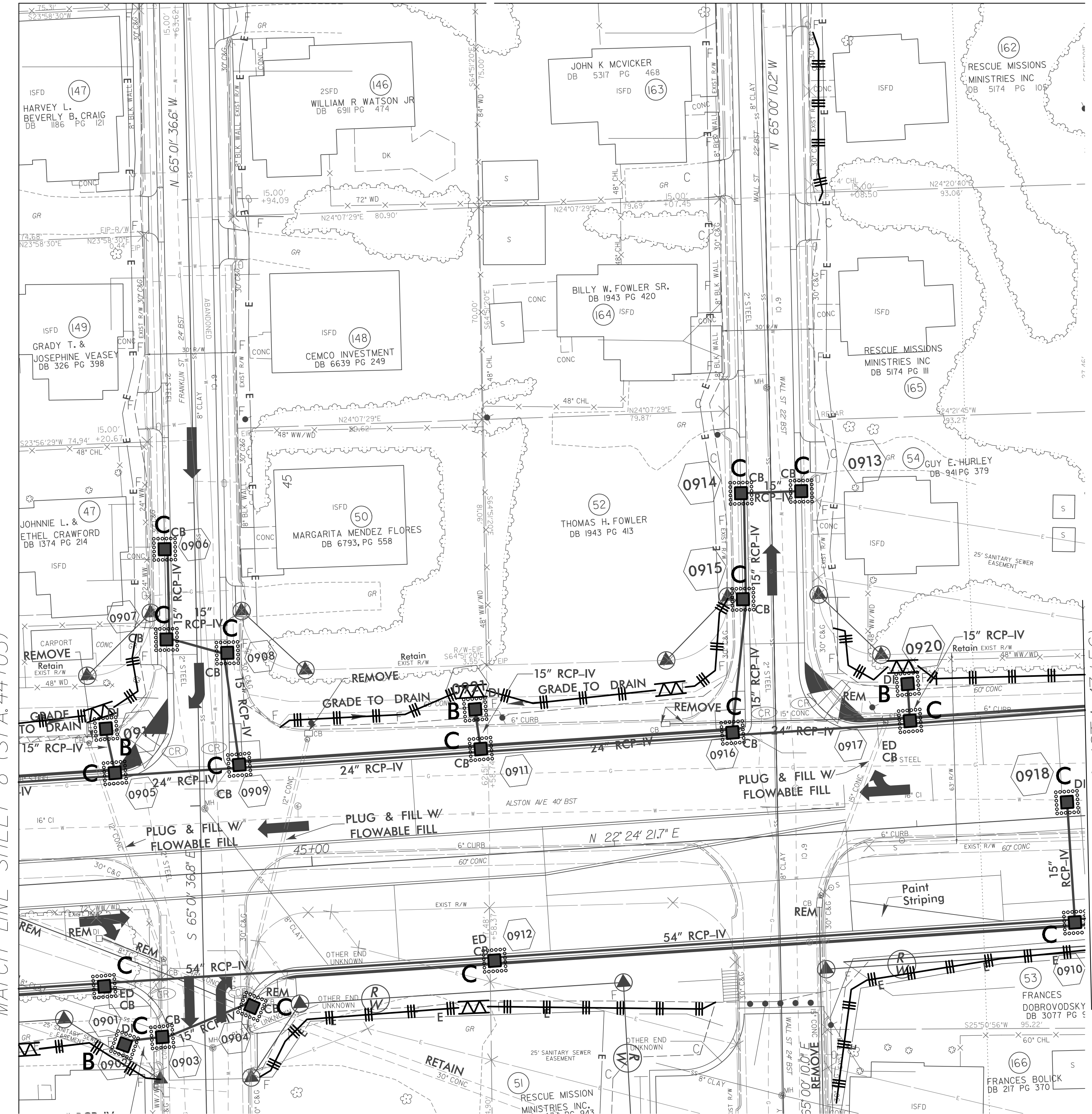
(150)
 RESCUE MISSION MINISTRIES INC.
 DB 2014 PG 881
 NO CLAIM

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-30/CONST-9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCH LINE SHEET 8 (STA. 44+03)

MATCH LINE SHEET 10 (STA. 47+56)



R/W Revision 3/31/14 JCL
 Added Proposed 12' Driveway to Parcel 46 Off of Franklin St.
 Changed Deed Book Description for Parcel 53

4/13/2015
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 onahome

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-31/CONST-10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

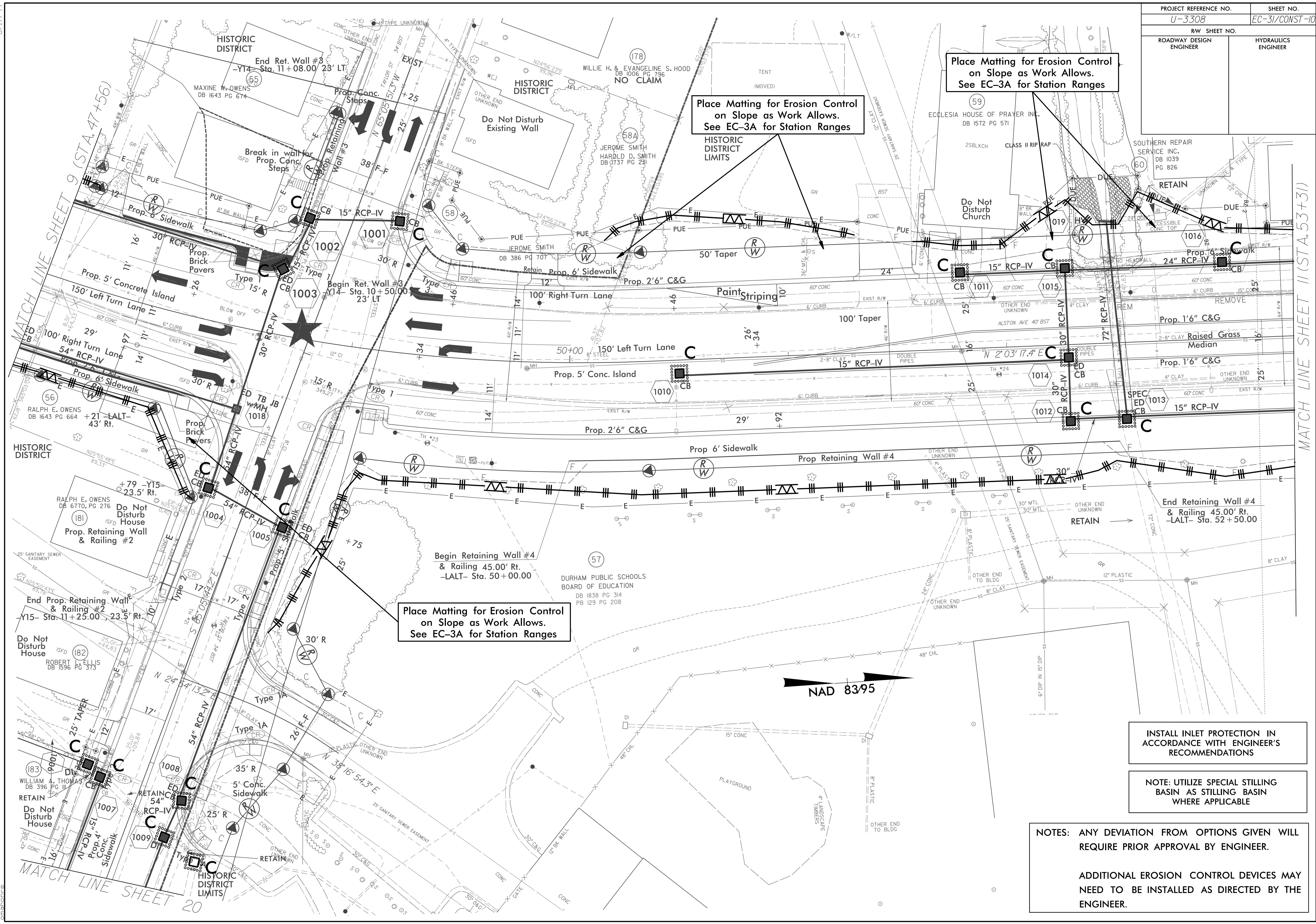
INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

RW Revision 6/11/14 JCL
 Converted Permanent Utility Easement (PUE) to Temporary Construction Easement (TCE) on Parcel 57, Converted TCE to PUE on Parcel 59, Added new PUE to Parcel 60.



8/17/99
 4/13/2015
 RA:Rocob@ecnu3308.r.dj.ec.ps10.dgn
 01/01/2015

MATCH LINE SHEET 20

MATCH LINE SHEET 11 (STA. 53+31)

NAD 83/95

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-32/CONST-11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

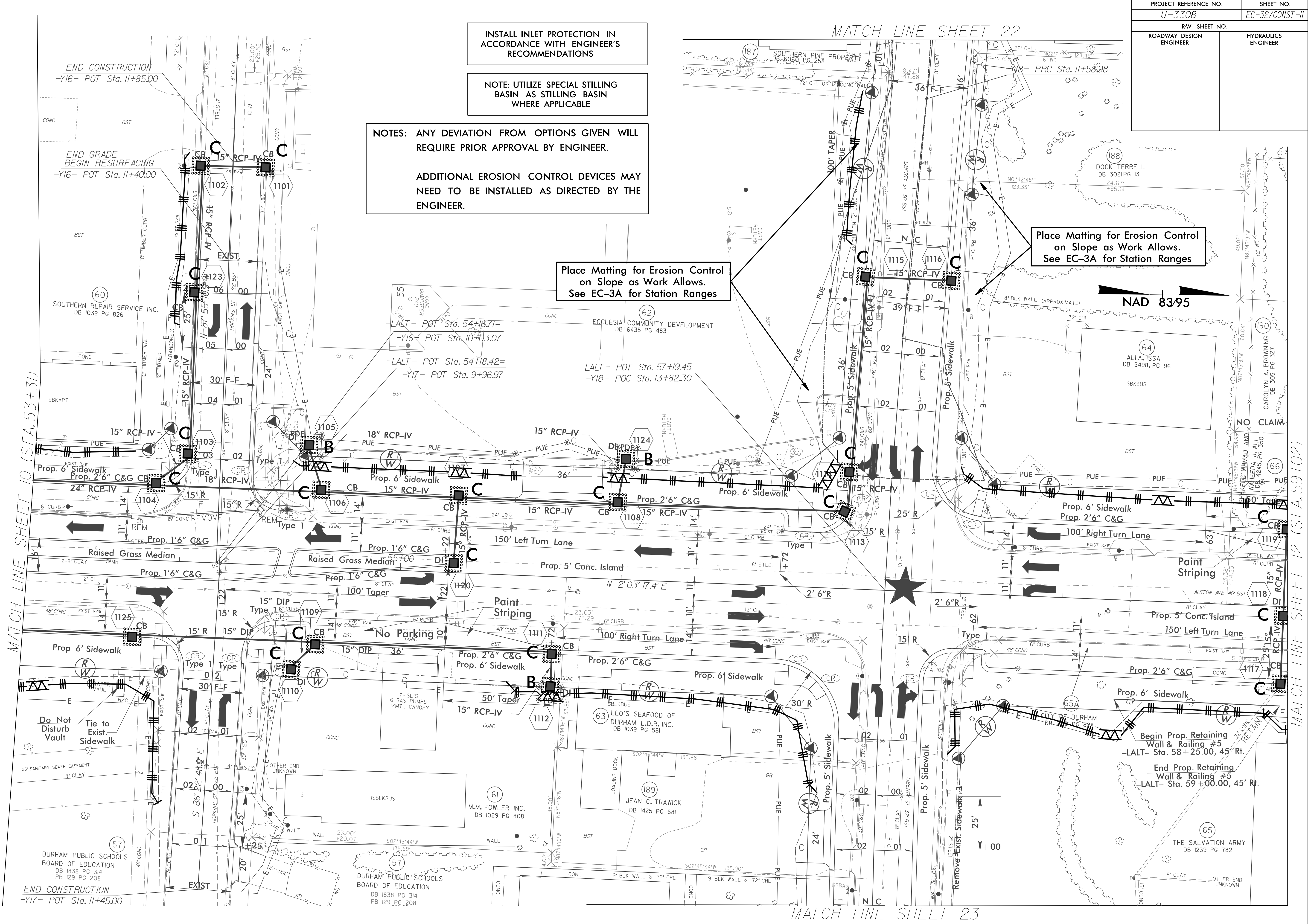
NAD 8395

RW Revision 6/1/14 JCL

Added new Permanent Utility Easement (PUE) to Parcel 60, Converted Temporary Construction Easements (TCE) to PUE on Parcels 62, 66, 64 and 187, Converted PUE to TCE on Parcel 57.

MATCH LINE SHEET 10 (STA. 53+31)

MATCH LINE SHEET 12 (STA. 59+02)



MATCH LINE SHEET 23

8/17/99

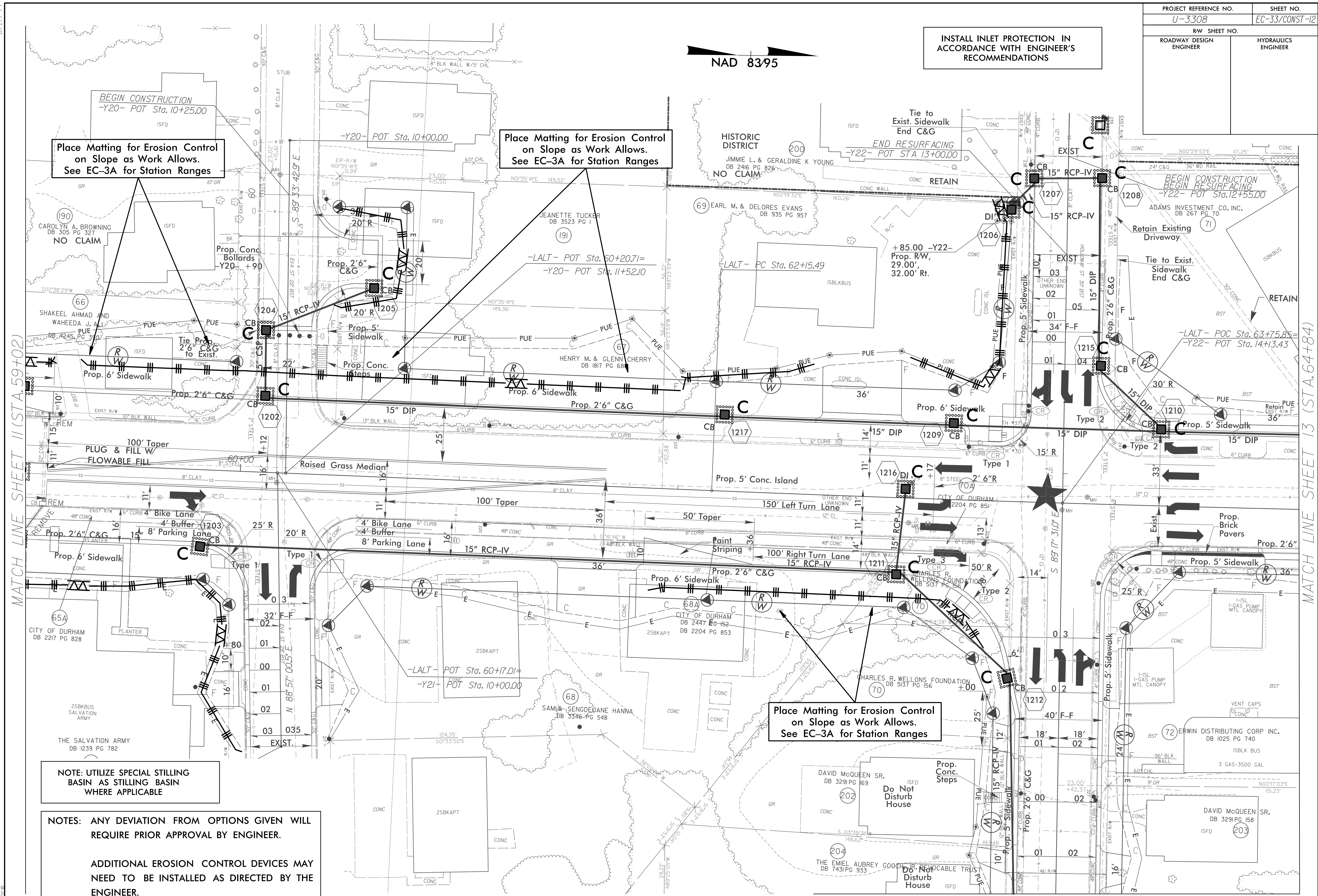
11/3/2015

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PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-33/CONST-12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NAD 83/95



Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

Place Matting for Erosion Control on Slope as Work Allows. See EC-3A for Station Ranges

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

Converted Temporary Construction Easement (TCE) to Permanent Utility Easement (PUE) on Parcels 66, 67, 69, 70, 71, 202 and 204.

R/W Revision 6/1/14 JCL

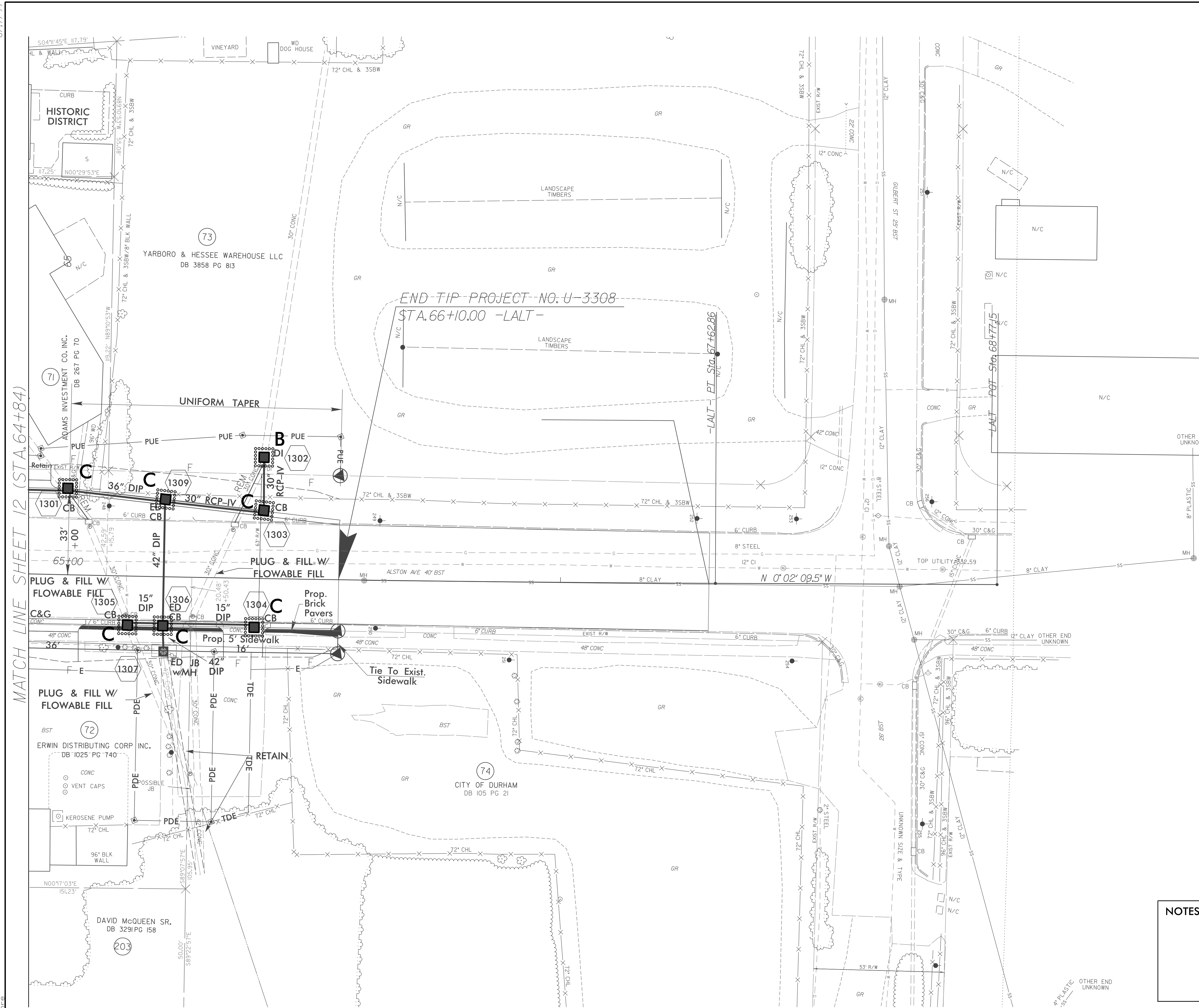
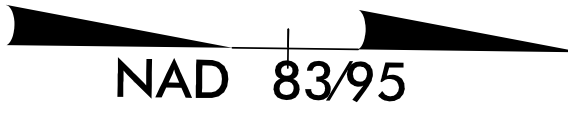
MATCH LINE SHEET 11 (STA. 59+02)

MATCH LINE SHEET 13 (STA. 64+84)

MATCH LINE SHEET 24

8/17/99
4/13/2015
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mchadone

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-34/CONST-13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

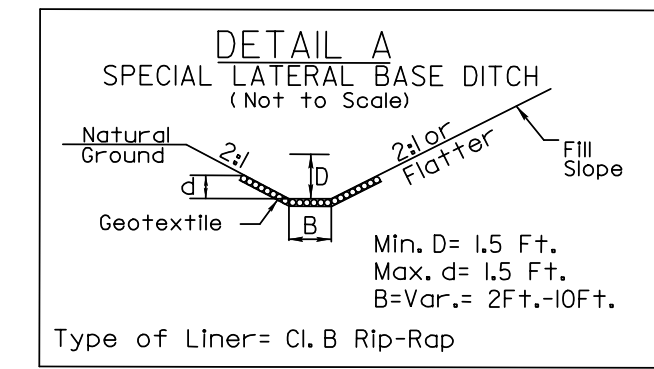
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

R/W Revision 12/09/13 JCL
Added Contaminated Soil Symbols to
Parcels 71 & 72

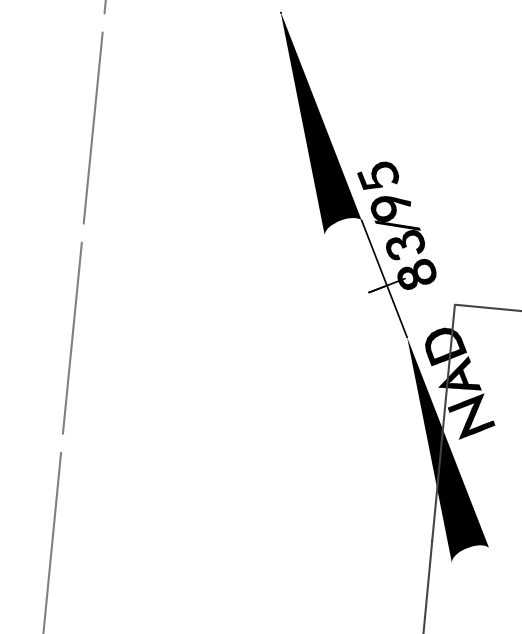
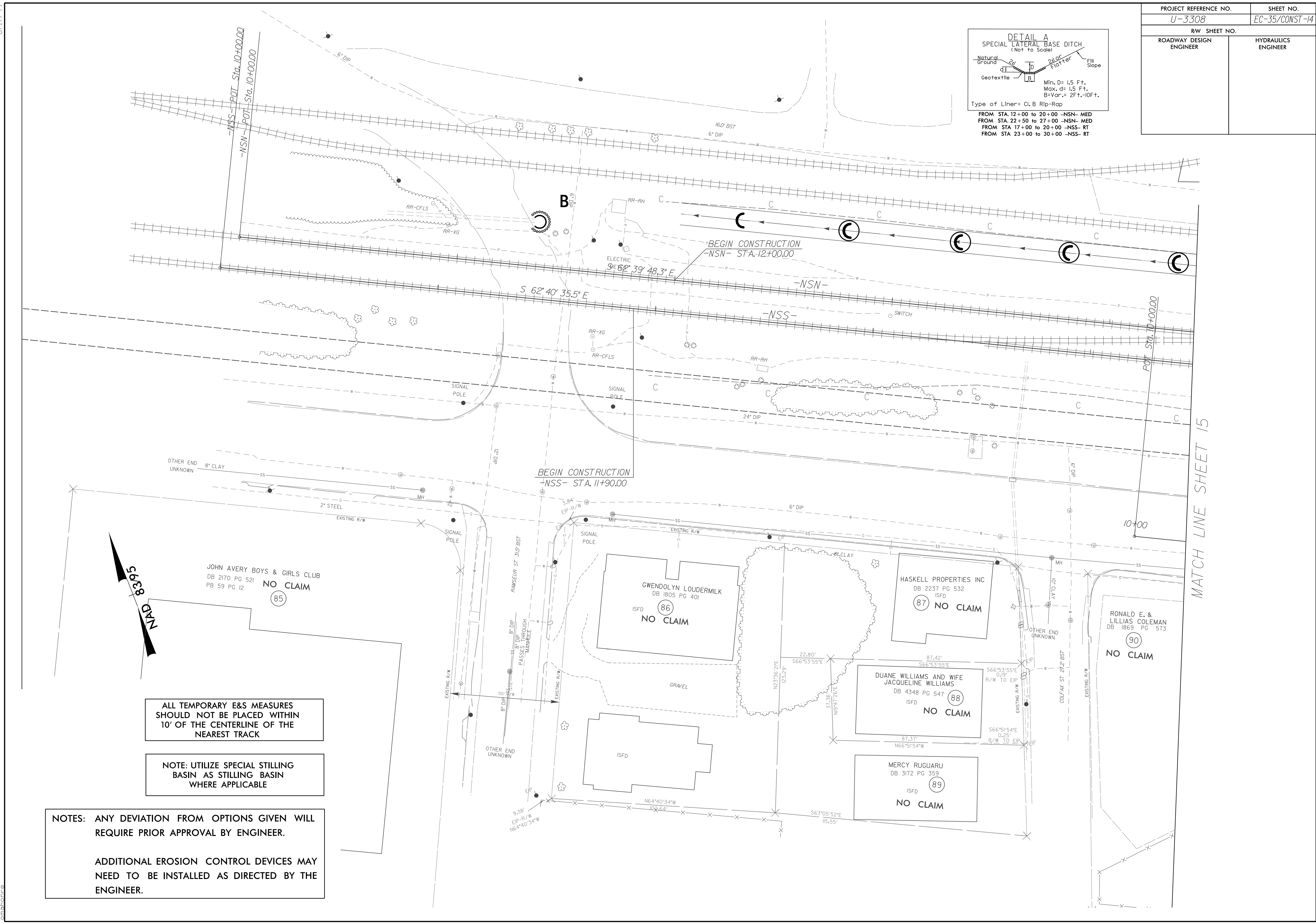
4/13/2015 R:\Road\3308\EC\3308_r.dwg EC-ps13.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-35/CONST-14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Min. D= 1.5 Ft.
 Max. d= 1.5 Ft.
 B=Var.= 2ft.-10ft.
 Type of Liner= Cl. B Rip-Rap

FROM STA. 12+00 TO 20+00 -NSN- MED
 FROM STA. 22+50 TO 27+00 -NSN- MED
 FROM STA. 17+00 TO 20+00 -NSS- RT
 FROM STA. 23+00 TO 30+00 -NSS- RT



ALL TEMPORARY E&S MEASURES SHOULD NOT BE PLACED WITHIN 10' OF THE CENTERLINE OF THE NEAREST TRACK

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

JOHN AVERY BOYS & GIRLS CLUB
 DB 2170 PG 521
 PB 59 PG 12
 NO CLAIM
 (85)

GWENDOLYN LOUDERMILK
 DB 1805 PG 401
 ISFD
 NO CLAIM
 (86)

HASKELL PROPERTIES INC
 DB 2237 PG 532
 ISFD
 NO CLAIM
 (87)

DUANE WILLIAMS AND WIFE
 JACQUELINE WILLIAMS
 DB 4348 PG 547
 ISFD
 NO CLAIM
 (88)

MERCY RUGUARU
 DB 3172 PG 359
 ISFD
 NO CLAIM
 (89)

RONALD E. &
 LILLIAS COLEMAN
 DB 1869 PG 573
 NO CLAIM
 (90)

MATCH LINE SHEET 15

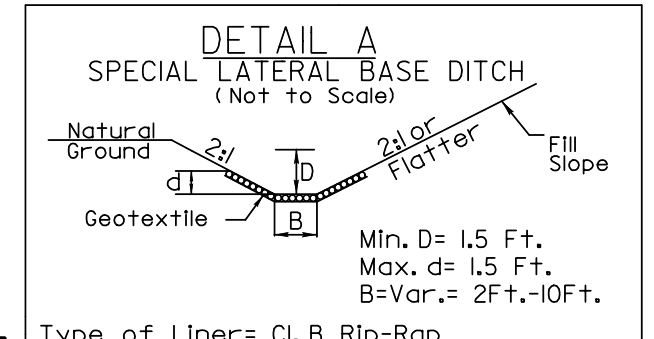
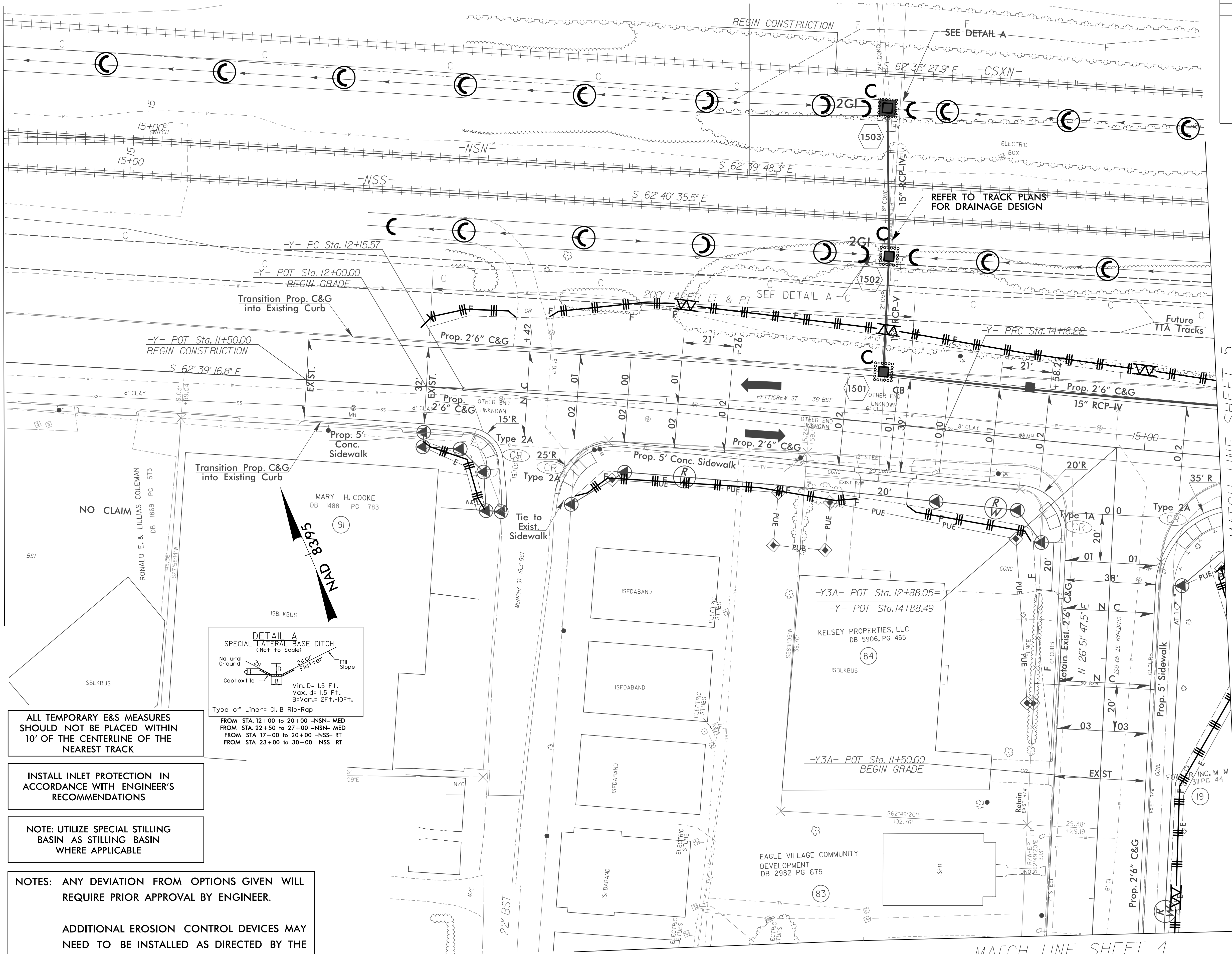
4/13/2015 R:\R\ec\ec\proj\3308.r\dj.ec.ps14.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-36/CONST-15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

R/W Revision 6/1/14 JCL
 Converted Temporary Construction Easement (TCE) to Permanent Utility Easement (PUE) on Parcels 83 and 84.
 Added new PUE to Parcels 19, 83 and 84

MATCH LINE SHEET 14

MATCH LINE SHEET 5



ALL TEMPORARY E&S MEASURES SHOULD NOT BE PLACED WITHIN 10' OF THE CENTERLINE OF THE NEAREST TRACK

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

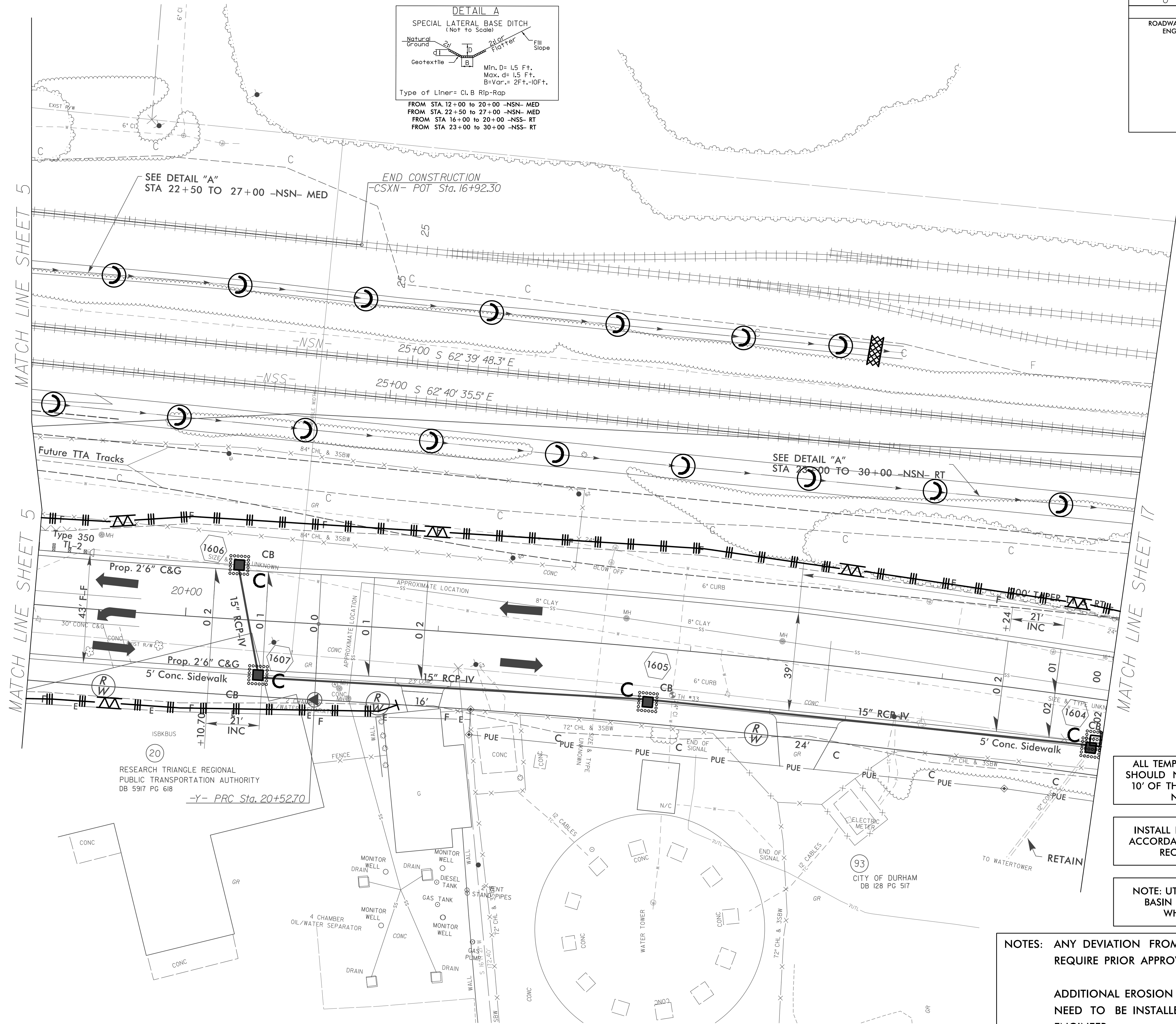
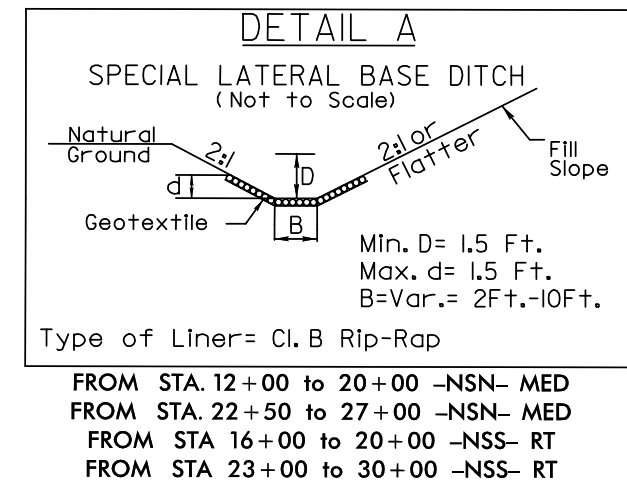
 ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

MATCH LINE SHEET 4

8/17/99
4/13/2015
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RW Revision 6/1/14 JCL
 Removed Permanent Utility Easement (PUE) from Parcel 20.

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-37/CONST-16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



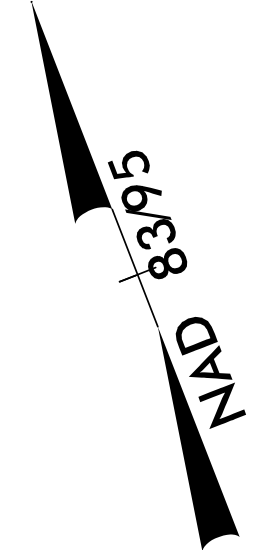
ALL TEMPORARY E&S MEASURES SHOULD NOT BE PLACED WITHIN 10' OF THE CENTERLINE OF THE NEAREST TRACK

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

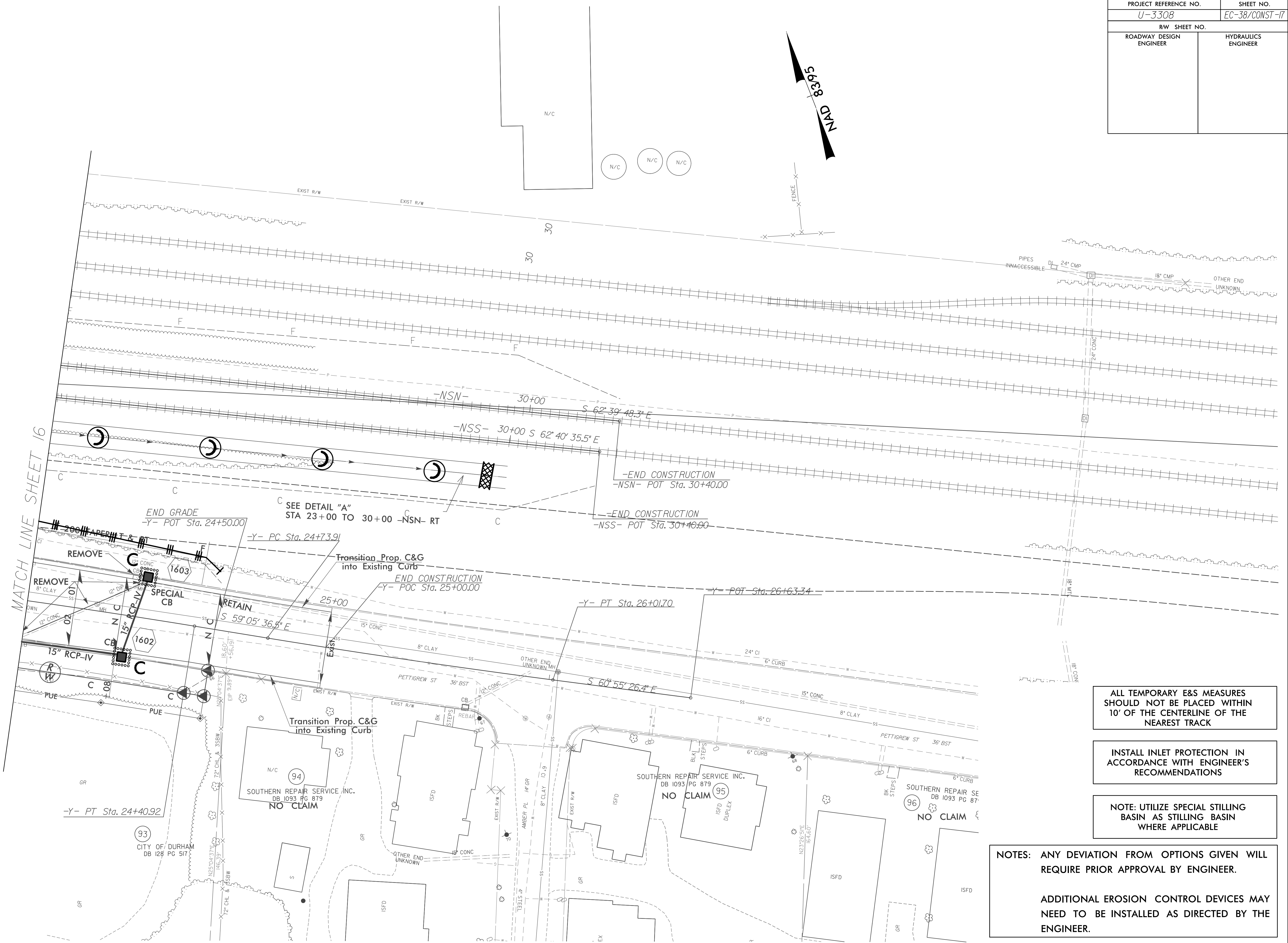
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



8/17/99
 4/13/2015
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 onshore

PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-38/CONST-17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99
4/13/2015
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ALL TEMPORARY E&S MEASURES SHOULD NOT BE PLACED WITHIN 10' OF THE CENTERLINE OF THE NEAREST TRACK

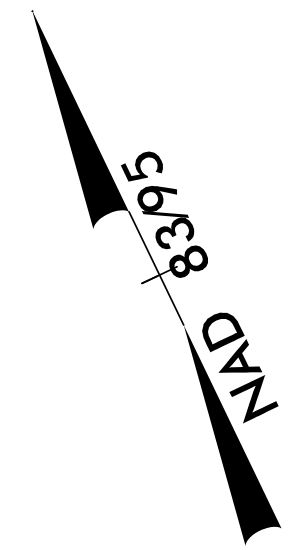
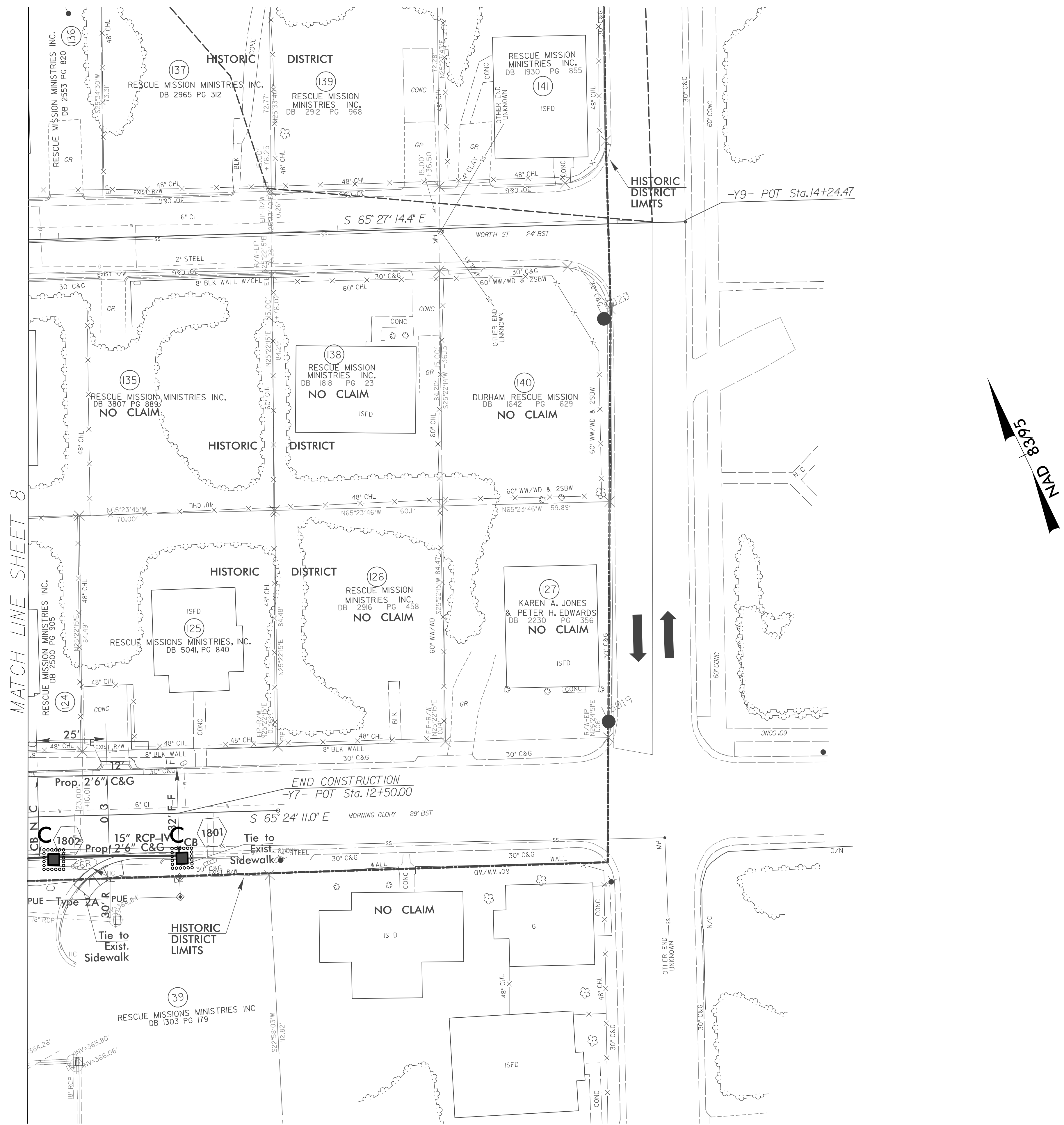
INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-39/CONST-18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

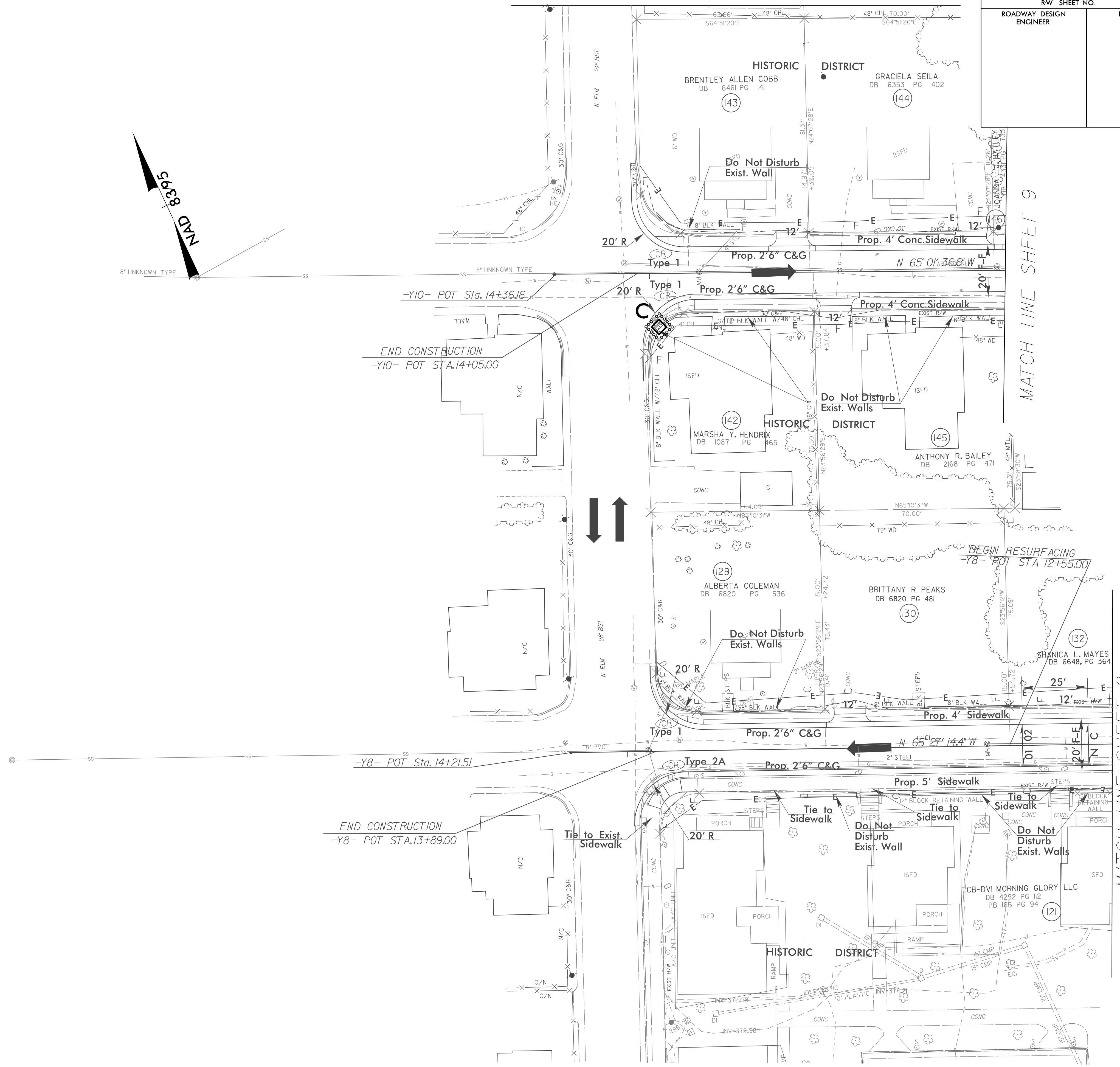
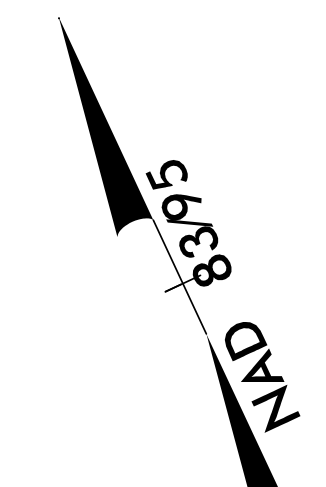
8/17/99
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PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-40/CONST-19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH LINE SHEET 21

MATCH LINE SHEET 9

MATCH LINE SHEET 8



RW Revision 33/14 JCL
Parcel # 158 Property Lines Updated

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

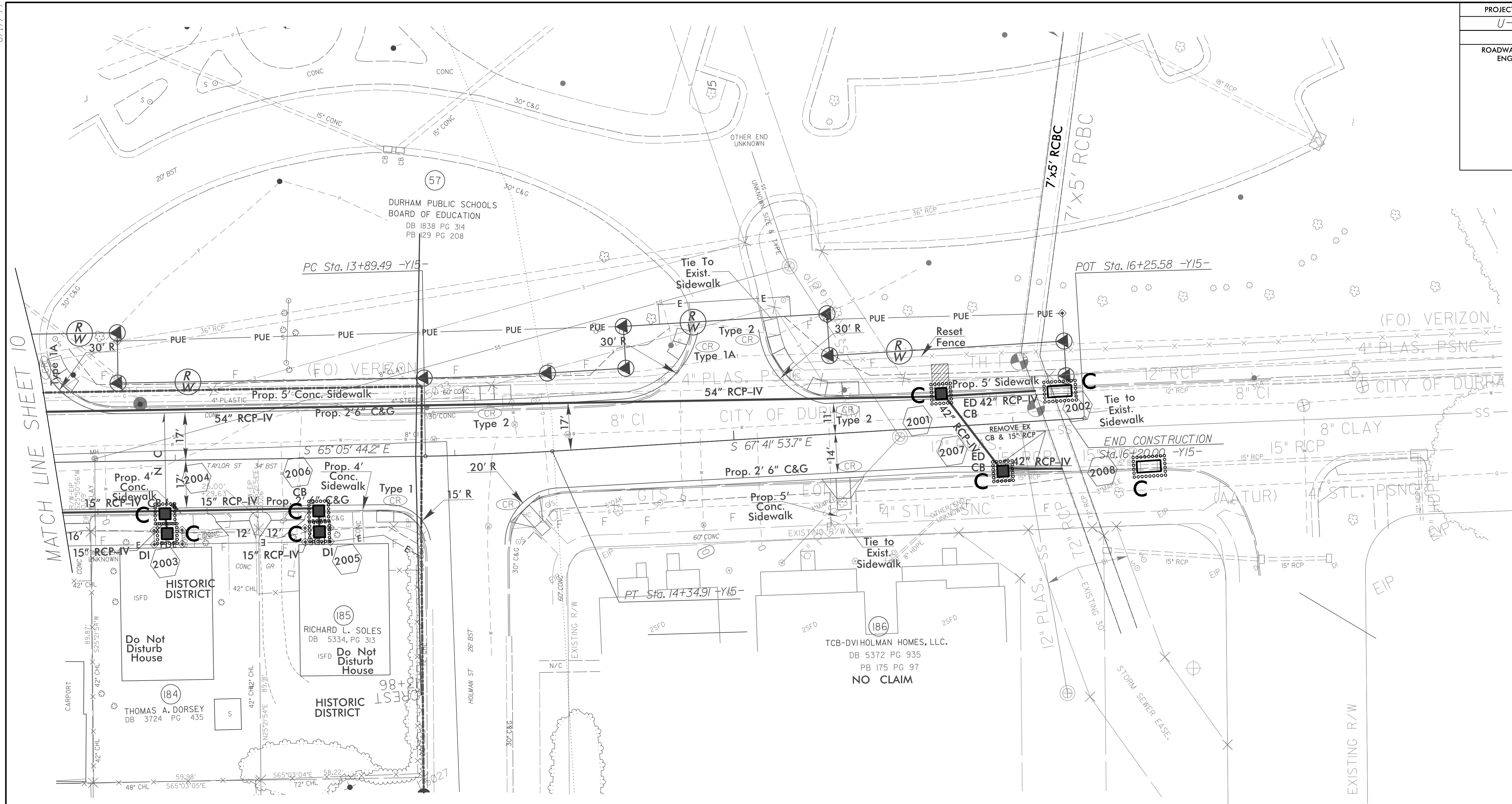
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

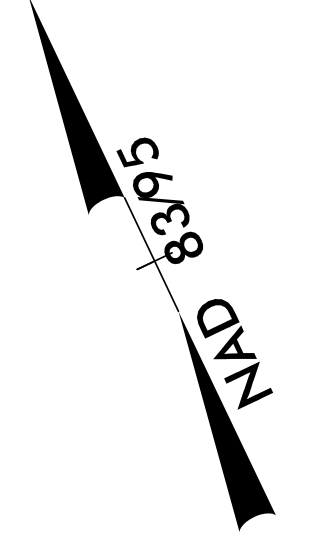
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PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-41/CONST-20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99



MATCH LINE SHEET 10



RW Revision 12/09/13 JCL
Changed Property Owner Name and Deed Information on Parcel 185

INSTALL INLET PROTECTION IN ACCORDANCE WITH ENGINEER'S RECOMMENDATIONS

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

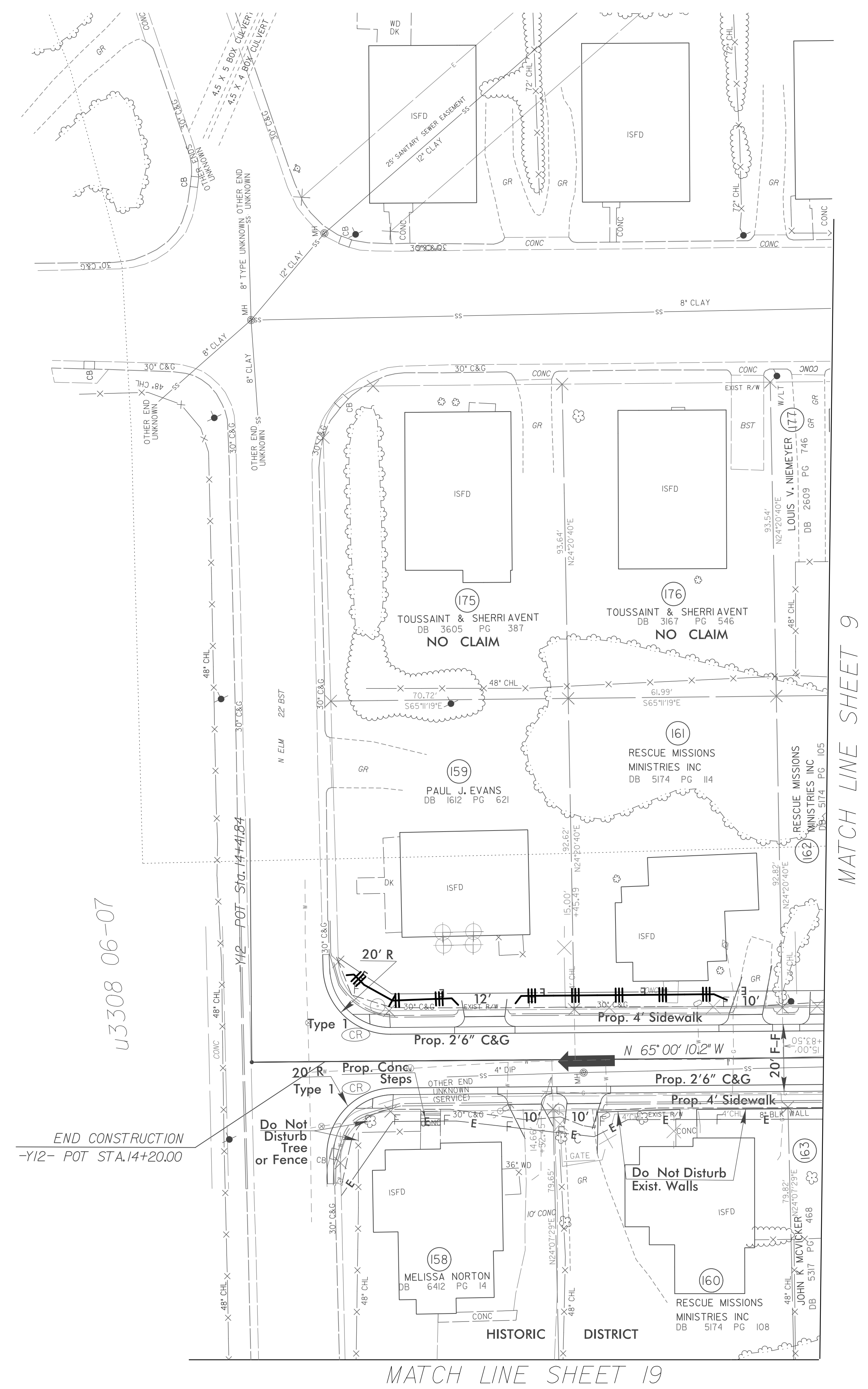
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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RW Revision 33114 JCL
Parcel # 158 Property Lines Updated

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PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-42/CONST-21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

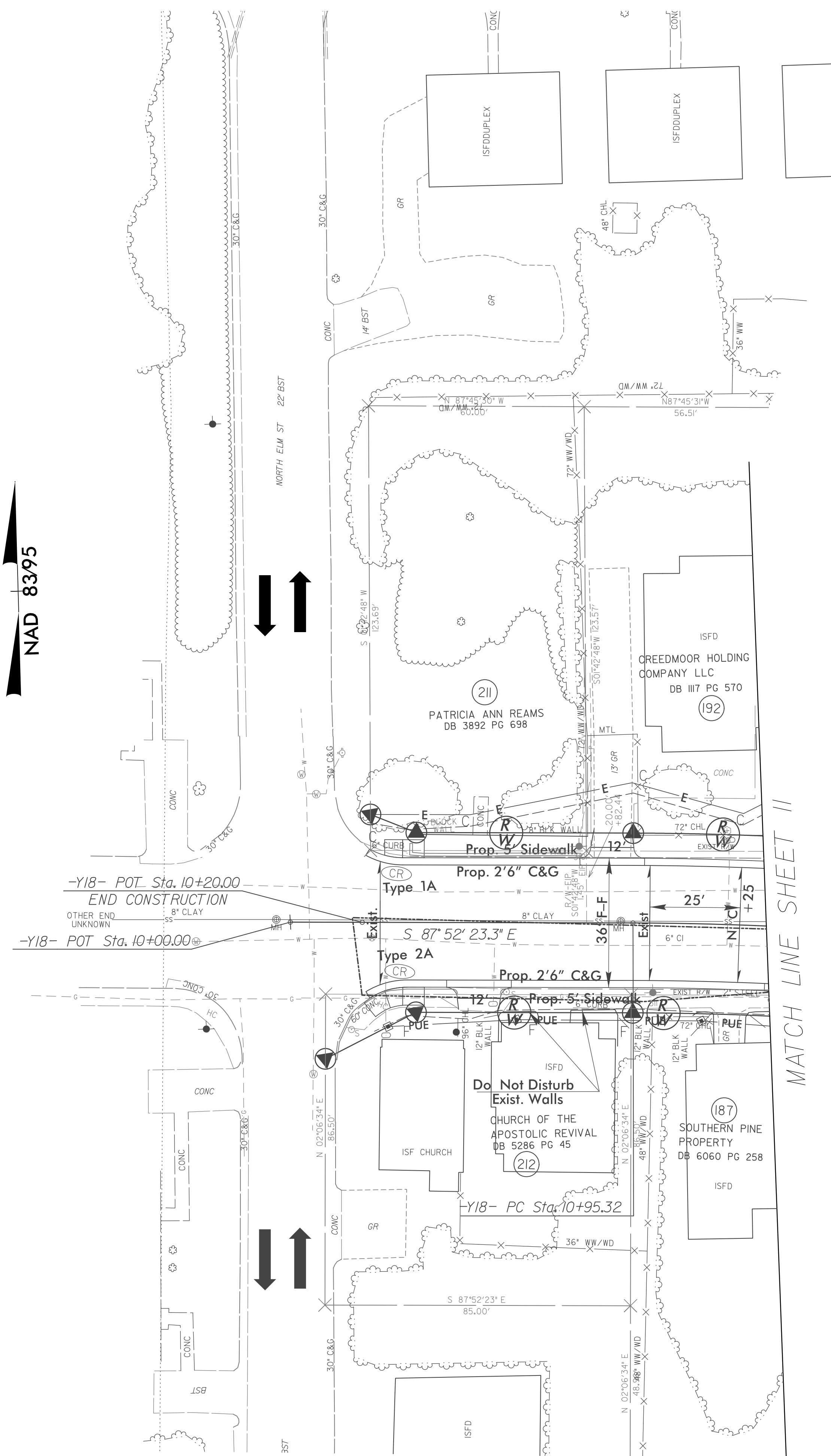
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

RW Revision 6/1/14 JCL
 Converted Temporary Construction Easement (TCE) to Permanent Utility Easement (PUE) on Parcels 187 and 212.

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PROJECT REFERENCE NO.	SHEET NO.
U-3308	EC-43/CONST-22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

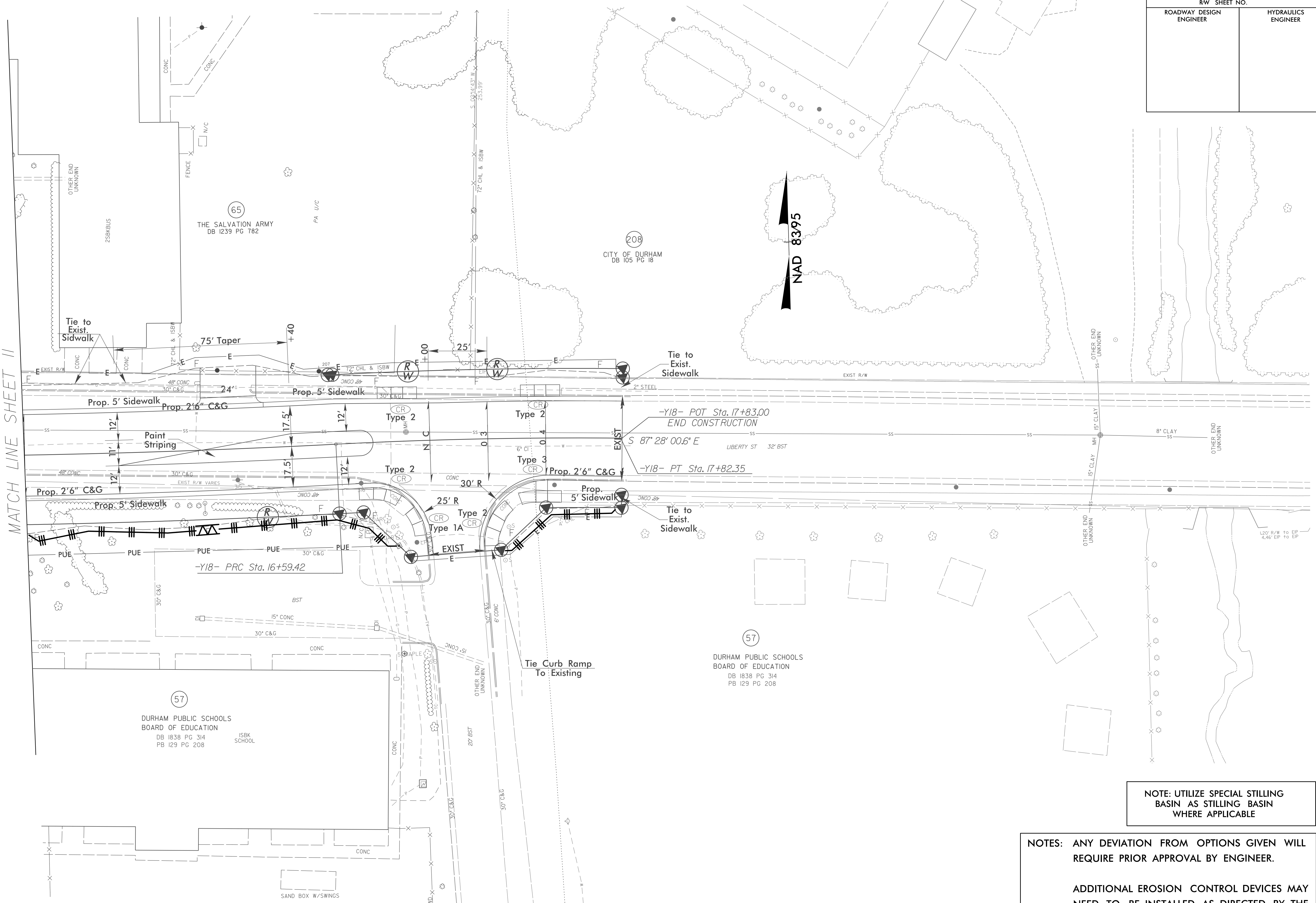
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

R/W Revision 4/15/14 JCL
Adjusted Existing R/W Line on Parcels 65 and 208

8/17/99

PROJECT REFERENCE NO. U-3308	SHEET NO. EC-44/CONST-23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCH LINE SHEET II



NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

4/13/2015
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