STATE	T.I.P. #	SHEET #
NC	K-4907	1 of 60

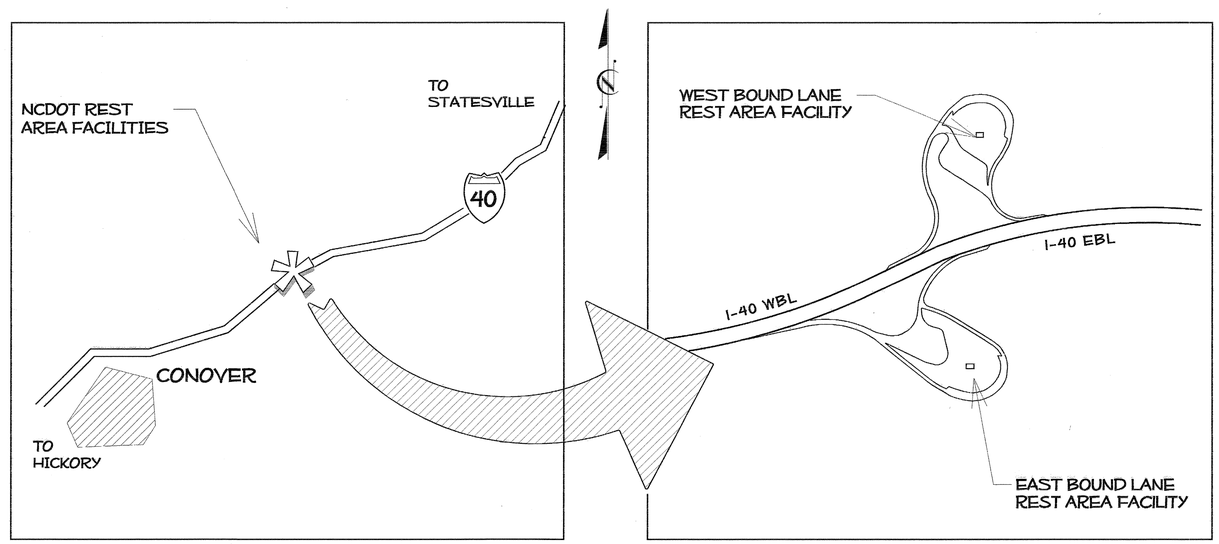
WBS #	F.A. Project #	Description
39893.1.1		P.E.
		R/W
39893.3.ST1	STM-040-2(146)117	CONST.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CATAWBA COUNTY

LOCATION: I-40 CATAWBA COUNTY REST AREA PAIR EAST OF CONOVER, NC - MM 136 APPROX.

TYPE OF WORK: CONSTRUCTION OF NEW REST AREA BLDGS., RESTORATION OF EXISTING BLDGS. AND SITE WORK



VICINITY MAPS

Contract #: C202171 - RA Catawba County / I-40 Rest Area Renovation

REST AREA PROJECT DEVELOPMENT	SITE / LANDSCAPE DESIGN	ARCHITECTURAL / ENGINEERING
REST AREA SECTION	LANDSCAPE DESIGN & DEVELOPMENT	ARCHITECT: NCDOT GENERAL SERVICES - FACILITIES DESIGN 1 S. WILMINGTON STREET RALEIGH, NC 27601 919.715.0400
ROADSIDE ENVIRONMENTAL UNIT 1557 MAIL SERVICE CENTER RALEIGH, NORTH CAROLINA 27699-1557 OFFICE (919) 733-2920 FAX (919) 733-9810	ROADSIDE ENVIRONMENTAL UNIT 1557 MAIL SERVICE CENTER RALEIGH, NORTH CAROLINA 27699-1557 OFFICE (919) 733-2920 FAX (919) 733-9810	MECHANICAL/ELECTRICAL/PLUMBING.: TRIANGLE ENGINEERING ASSOC 1320 SE MAYNARD ST, SUITE 201 CARY NC 27611 919.678.6107

North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina

I-40
CATAWBA COUNTY
REST AREA RENOVATIONS

Plan :

Plans Drawn By:	WILSON
Scale	n/a
Date	10 / 21 / 09
Letting Date	FEB 16, 2010
	2006 Standard Specifications
Sheet Description	TITLE SHEET
Sheet #	1

STATE NC	T.I.P. # K-4907	SHEET # 2 of 60
WBS #	F.A. Project #	Description
39893.1.1		P.E.
		R/W
39893.3.ST1	STM-040-2(146)117	CONST.

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1 PROJECT TITLE SHEET & VICINITY MAPS
2 INDEX OF SHEETS AND STANDARD SPEC REFERENCES
3 SUMMARY OF QUANTITIES

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T2 DESIGN DATA FOR EXISTING BUILDING

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A2 EXT. ELEVATIONS & ROOF PLAN
A3 BUILDING SECTIONS
A4 INTERIOR ELEVATIONS & DETAILS
A5 FINISH, WINDOWS AND DOORS SCHEDULES
A6 WALL SECTIONS & ELEVATIONS
A7 REFLECTED CEILING PLAN & DETAILS

S1 FOUNDATION PLAN & DETAILS
S2 FRAMING PLAN & DETAILS

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P1A PLUMBING WASTE PLAN - WBL
P2 PLUMBING WATER PLAN - EBL & WBL
P3 PLUMBING WASTE RISER & DETAILS - EBL
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PHASE 2

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VA2 ELEVATIONS
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VP1 PLUMBING WASTE PLAN & RISER
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VM1 MECHANICAL PLAN

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SITE DEVELOPMENT PLANS

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LS-002WBL EXISTING SITE PLAN
LC-001 WBL PHASING PLAN
LR-001 WBL DEMOLITION PLAN
LL-001 WBL LAYOUT PLAN
LG-001 WBL GRADING PLAN
LP-001 WBL LANDSCAPE PLAN OVERALL
LP-002 WBL LANDSCAPE PLAN
LU-001 WBL UTILITY PLAN
LS-003 EBL SITE PLAN
LS-004 EBL EXISTING SITE PLAN
LC-002 EBL PHASING PLAN
LR-002 EBL DEMOLITION PLAN
LL-002 EBL LAYOUT PLAN
LG-002 EBL GRADING PLAN
LP-003 EBL LANDSCAPE PLAN OVERALL
LP-004 EBL LANDSCAPE PLAN
LU-002 EBL UTILITY PLAN

SBL & NBL COMMON DETAIL SHEETS

LP-005 LANDSCAPE PLANTING SUMMARY OF QUANTITIES
LP-006 PLANTING DETAILS
LD-001 PICNIC SHELTER DETAIL
LD-002 PICNIC TABLE DETAIL
LD-003 FLAGPOLE / WASTE CONTAINER/ YARD HYDRANT
LD-004 6' BENCH/ SPLIT RAIL FENCE/ ROOF LEADER CONNECTION
LD-005 CONCRETE STEPS/ HANDRAIL

2006 ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS APPEAR IN ' ROADWAY STANDARD DRAWINGS" - HIGHWAY DESIGN BRANCH - NC DEPARTMENT OF TRANSPORTATION - RALEIGH, NC DATED JULY, 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE ARE HEREBY CONSIDERED PART OF THESE PLANS:

STND #	TITLE
840. 14	CONCRETE DROP INLET
840. 15	BRICK DROP INLET
840.16	DROP INLET FRAME AND NARROW SLOT GRATE
840 45	PRECAST DRAINAGE STRUCTURE
846. 01	CONCRETE CURB, GUTTER AND CURB & GUTTER
848. 01	CONCRETE SIDEWALK
848. 05	WHEEL CHAIR RAMP

REST AREA PROJECT DESIGN & DEVELOPMENT

REST AREA SECTION

ROADSIDE ENVIRONMENTAL UNIT
1557 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1557
OFFICE (919) 733-2920 FAX (919) 733-9810

SITE / LANDSCAPE DESIGN

LANDSCAPE DESIGN & DEVELOPMENT

ROADSIDE ENVIRONMENTAL UNIT
1557 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1557
OFFICE (919) 733-2920 FAX (919) 733-9810

ARCHITECTURAL / ENGINEERING

ARCHITECT: NCDOT GENERAL SERVICES - FACILITIES DESIGN
1 S. WILMINGTON STREET
RALEIGH, NC 27601 919.715.0400

MECHANICAL/ELECTRICAL/PLUMBING.: BURKE DESIGN GROUP
305-109 DURHAM DRIVE
RALEIGH, NC 27603 919.618.0717

Contract #: C202161 - RA Catawba County / I-40 Rest Area Renovation

North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina

I-40
CATAWBA COUNTY
REST AREA RENOVATIONS

Plan :

Plans Drawn By: WILSON
Scale: n/a
Date: 10 / 21 / 09
Letting Date: FEB 16, 2010
2006 Standard Specifications
Sheet Description: INDEX OF SHEETS
Sheet # 2

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202171

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0366000000-E	310	256	LF	15" RC PIPE CULVERTS, CLASS III
1077000000-E	SP	20	TON	#57 STONE
2286000000-N	840	3	EA	MASONRY DRAINAGE STRUCTURES
2364000000-N	840	3	EA	FRAME WITH TWO GRATES, STD 840.16
2549000000-E	846	30	LF	2'-6" CONCRETE CURB & GUTTER
2591000000-E	848	1,220	SY	4" CONCRETE SIDEWALK
2605000000-N	848	2	EA	CONCRETE WHEELCHAIR RAMPS
3575000000-E	SP	1,876	LF	GENERIC FENCING ITEM TEMPORARY 72" CHAIN LINK FENCE
3578000000-N	SP	2	EA	GENERIC FENCING ITEM TEMPORARY DOUBLE GATES, 72" HIGH, 8' WIDE, 16' OPENING
3656000000-E	876	75	SY	FILTER FABRIC FOR DRAINAGE
6000000000-E	1605	375	LF	TEMPORARY SILT FENCE
6006000000-E	1610	25	TON	STONE FOR EROSION CONTROL, CLASS A
6012000000-E	1610	20	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	0.25	ACR	TEMPORARY MULCHING
6018000000-E	1620	15	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.05	TON	FERTILIZER FOR TEMPORARY SEEDING
6036000000-E	1631	100	SY	MATTING FOR EROSION CONTROL
6042000000-E	1632	90	LF	1/4" HARDWARE CLOTH
6084000000-E	1660	0.25	ACR	SEEDING & MULCHING
6090000000-E	1661	10	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.05	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	10	LB	SEED FOR SUPPLEMENTAL SEEDING
6102000000-E	1664	2,681	SY	SODDING
6108000000-E	1665	0.1	TON	FERTILIZER TOPDRESSING
6114500000-N	SP	15	MHR	SPECIALIZED HAND MOWING
6665000000-E	1670	668	SY	POSTEMERGENT HERBICIDAL TREATMENT FOR PLANT BEDS
6670000000-E	1670	668	SY	PREEMERGENT HERBICIDAL TREATMENT FOR PLANT BEDS
6674000000-N	SP	Lump Sum		GENERIC PLANTING ITEM (LS) LANDSCAPING PLANTING (EBL)
6674000000-N	SP	Lump Sum		GENERIC PLANTING ITEM (LS) LANDSCAPING PLANTING (WBL)
6885000000-E	SP	66	SY	6" CONCRETE REINFORCED PAD
6890000000-E	SP	4	CY	CONCRETE STEPS
6895000000-E	SP	18	LF	HANDRAIL ON STEPS
6900000000-E	SP	150	CY	TOPSOIL
6910000000-N	SP	2	EA	PICNIC SHELTER, SINGLE PICNIC TABLE
6970000000-N	SP	2	EA	GENERIC REST AREA ITEM 2" GATE VALVE BOX
6970000000-N	SP	2	EA	GENERIC REST AREA ITEM 3" GATE VALVE BOX
6970000000-N	SP	4	EA	GENERIC REST AREA ITEM 3/4" GATE VALVE BOX
6970000000-N	SP	10	EA	GENERIC REST AREA ITEM 4" SEWER DRAIN CLEANOUT
6970000000-N	SP	2	EA	GENERIC REST AREA ITEM 6' PARK BENCH
6970000000-N	SP	2	EA	GENERIC REST AREA ITEM CONNECTION TO SEWER MANHOLE/ SEWER LINE
6970000000-N	SP	2	EA	GENERIC REST AREA ITEM FLAGPOLE
6970000000-N	SP	2	EA	GENERIC REST AREA ITEM FLAGPOLE LIGHT
6970000000-N	SP	4	EA	GENERIC REST AREA ITEM NEW POST TOP LIGHT & POLE ON CONC FOUNDATION
6970000000-N	SP	2	EA	GENERIC REST AREA ITEM PERMANENT RELOCATION OF VENDING BUILDING
6970000000-N	SP	2	EA	GENERIC REST AREA ITEM PICNIC SHELTER RELOCATION
6970000000-N	SP	4	EA	GENERIC REST AREA ITEM PICNIC TABLE REMOVAL
6970000000-N	SP	1	EA	GENERIC REST AREA ITEM RELOCATE PAYPHONE & PEDESTAL
6970000000-N	SP	3	EA	GENERIC REST AREA ITEM RELOCATE POST TOP LIGHT & POLE ON CONC FOUNDATION
6970000000-N	SP	2	EA	GENERIC REST AREA ITEM TEMPORARY RELOCATION OF VENDING BUILDING (ON SITE)
6970000000-N	SP	12	EA	GENERIC REST AREA ITEM WASTE CONTAINER
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM ELECTRICAL INSTALLATION REST AREA SERVICE BUILDING EBL/WBL
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM ELECTRICAL INSTALLATION VENDING BUILDING EBL/WBL
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM GENERAL CONSTRUCTION REST AREA SERVICE BUILDING EBL/WBL
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM GENERAL CONSTRUCTION VENDING BUILDING EBL/WBL
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM HVAC INSTALLATION REST AREA SERVICE BUILDING EBL/WBL
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM HVAC INSTALLATION VENDING BUILDING EBL/WBL
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM LANDSCAPE GRADING (EBL)
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM LANDSCAPE GRADING (WBL)
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM LANDSCAPE LIGHTING (EBL)
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM LANDSCAPE LIGHTING (WBL)
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM PLUMBING INSTALLATION REST AREA SERVICE BUILDING EBL/WBL
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM PLUMBING INSTALLATION VENDING BUILDING EBL/WBL
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM SITE DEMOLITION (EBL)
6975000000-N	SP	Lump Sum		GENERIC REST AREA ITEM SITE DEMOLITION (WBL)
6980000000-E	SP	20	LF	GENERIC REST AREA ITEM 2" PVC WATER LINE (SCH 80)
6980000000-E	SP	210	LF	GENERIC REST AREA ITEM 3" PVC UTILITY SLEEVE
6980000000-E	SP	275	LF	GENERIC REST AREA ITEM 3" PVC WATER LINE (SDR21)
6980000000-E	SP	30	LF	GENERIC REST AREA ITEM 3/4" PVC WATER LINE (SCH 80)
6980000000-E	SP	424	LF	GENERIC REST AREA ITEM 4" SCH 40 DRAIN PIPE
6980000000-E	SP	200	LF	GENERIC REST AREA ITEM 6" PVC GRAVITY SEWER LINE (SDR35)
6980000000-E	SP	417	LF	GENERIC REST AREA ITEM 6" SCH 40 DRAIN PIPE
6980000000-E	SP	310	LF	GENERIC REST AREA ITEM ELECTRIC LINE INSTALL/REPAIR
6980000000-E	SP	849	LF	GENERIC REST AREA ITEM LANDSCAPE METAL EDGING
6980000000-E	SP	120	LF	GENERIC REST AREA ITEM PHONE LINE INSTALL/REPAIR
6980000000-E	SP	108	LF	GENERIC REST AREA ITEM SPLIT RAIL FENCE
6980000000-E	SP	1,326	LF	GENERIC REST AREA ITEM TREE PROTECTION FENCE
6985000000-E	SP	75	CY	GENERIC REST AREA ITEM HARDWOOD MULCH

Contract #: C202161 - RA Catawba County / I-40 Rest Area Renovation

North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina

I-40 CATAWBA COUNTY REST AREA RENOVATIONS

Plan :

Plans Drawn By: WILSON
Scale: n/a
Date: 10 / 21 / 09
Letting Date: FEB 16, 2010
2006 Standard Specifications
Sheet Description: SUMMARY OF QUAN
Sheet # 3

REST AREA PROJECT DESIGN & DEVELOPMENT
REST AREA SECTION
ROADSIDE ENVIRONMENTAL UNIT
1557 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1557
OFFICE (919) 733-2920 FAX (919) 733-9810

SITE / LANDSCAPE DESIGN
LANDSCAPE DESIGN & DEVELOPMENT
ROADSIDE ENVIRONMENTAL UNIT
1557 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1557
OFFICE (919) 733-2920 FAX (919) 733-9810

ARCHITECTURAL / ENGINEERING
ARCHITECT: NCDOT GENERAL SERVICES - FACILITIES DESIGN
1 S. WILMINGTON STREET
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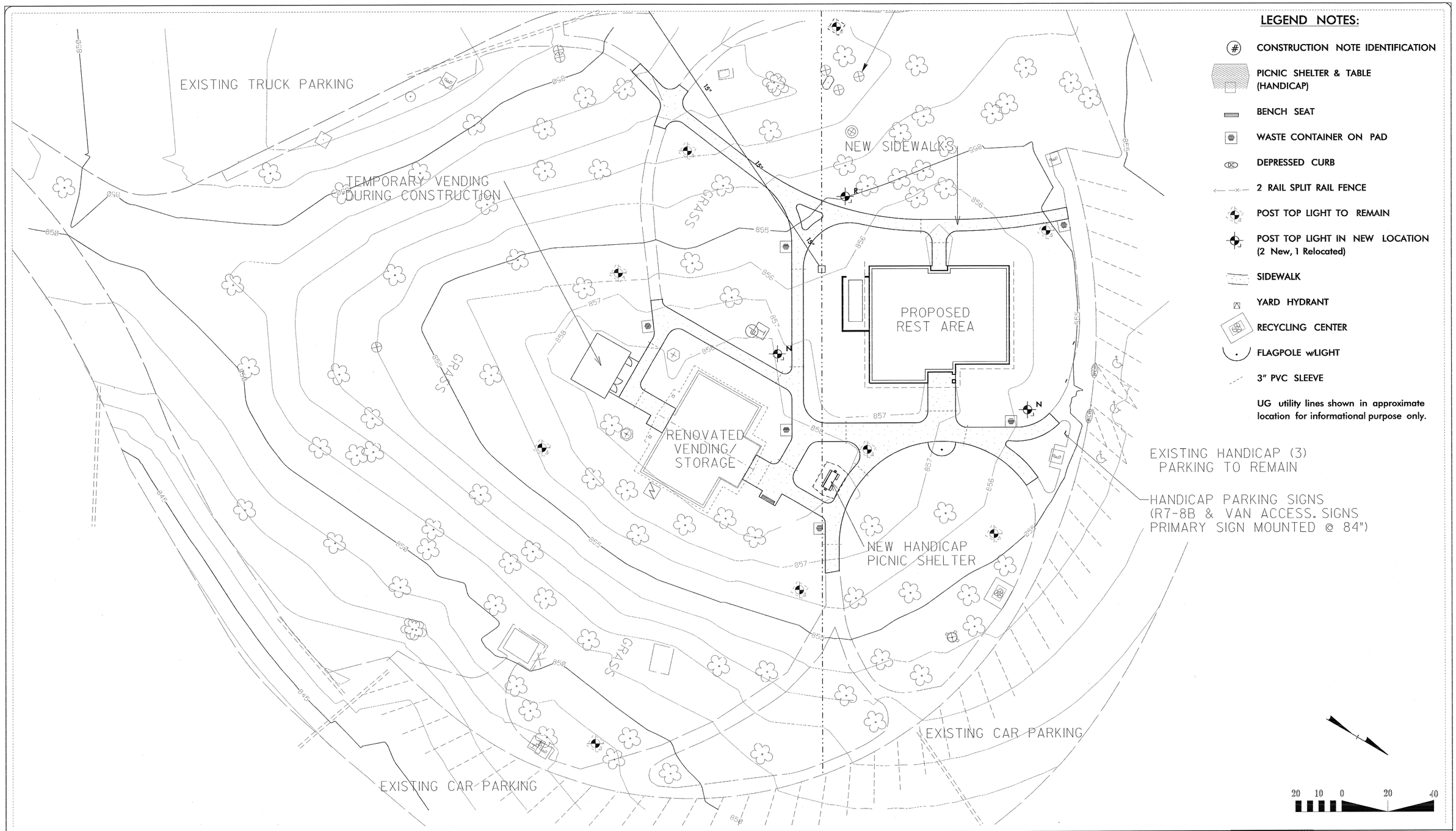

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NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY
REST AREA RENOVATION WBL

PROJECT #: 39893.1.1

REU ENGINEER:
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL No. 606 REGISTERED LANDSCAPE ARCHITECT 11/16/09 DANIEL L. WILSON

SHEET DESCRIPTION:

PREL. DESIGN DATE:	MAY 29, 2009
CHECKED BY & DATE:	
FINAL DESIGN DATE:	OCTOBER 27, 2009

I-40 WBL RENOVATION
SITE PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LS-001
TOTAL SHEET NO:

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY REST AREA RENOVATION WBL

PROJECT #: 39893.1.1

REU ENGINEERING

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

PREL. DESIGN DATE: MAY 29, 2009	I-40 WBL RENOVATION	T.I.P. # K-4907
CHECKED BY & DATE:	EXISTING SITE PLAN	WBS # 39893.3.ST1
FINAL DESIGN DATE: OCTOBER 27, 2009		FED I.D. # STM-040-2(146)117
		SHEET NO: LS-002 TOTAL SHEET NO:

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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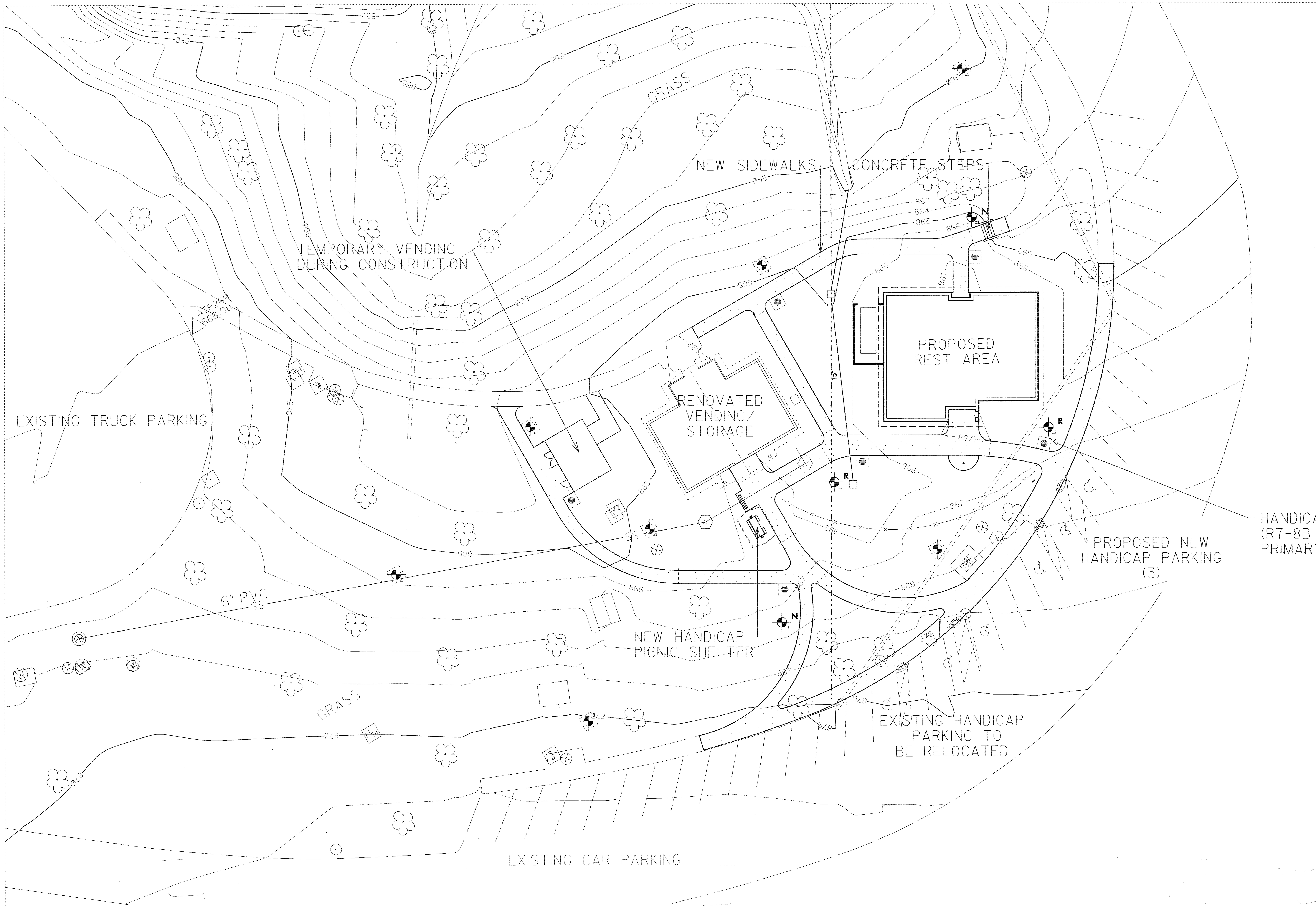
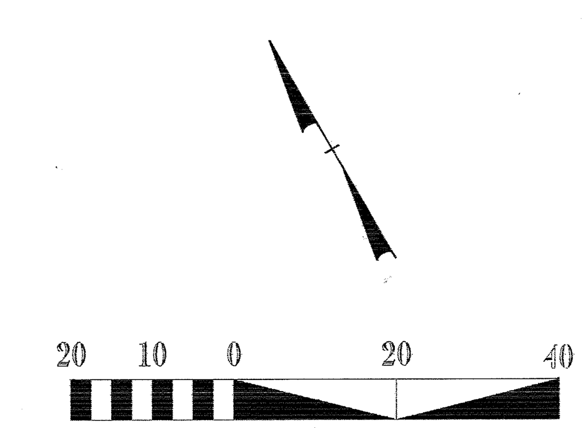


LEGEND NOTES:

- CONSTRUCTION NOTE IDENTIFICATION
- PICNIC SHELTER & TABLE (HANDICAP)
- BENCH SEAT
- WASTE CONTAINER ON PAD
- DEPRESSED CURB
- 2 RAIL SPLIT RAIL FENCE
- POST TOP LIGHT TO REMAIN
- POST TOP LIGHT IN NEW LOCATION (2 New, 2 Relocated)
- SIDEWALK
- YARD HYDRANT
- RECYCLING CENTER
- FLAGPOLE w/LIGHT
- 3" PVC SLEEVE

UG utility lines shown in approximate location for informational purpose only.



NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 Catawba County Rest Area Renovation EBL

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

PREL. DESIGN DATE:	MAY 29, 2009
CHECKED BY & DATE:	
FINAL DESIGN DATE:	OCTOBER 27, 2009

I-40 EBL RENOVATION

SITE PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. #	K-4907
WBS #	39893.3.ST1
FED I.D. #	STM-040-2(146)117
SHEET NO:	TOTAL SHEET NO:
LS-003	

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$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$$

UG utility lines shown in approximate location for informational purpose only.

$$$$$$$SYSTIME$$$$$ $$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$ $$$$$USERNAME$$$$$

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY REST AREA RENOVATION EBL

PROJECT #: 39893.1.1

REU ENGINEER:

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

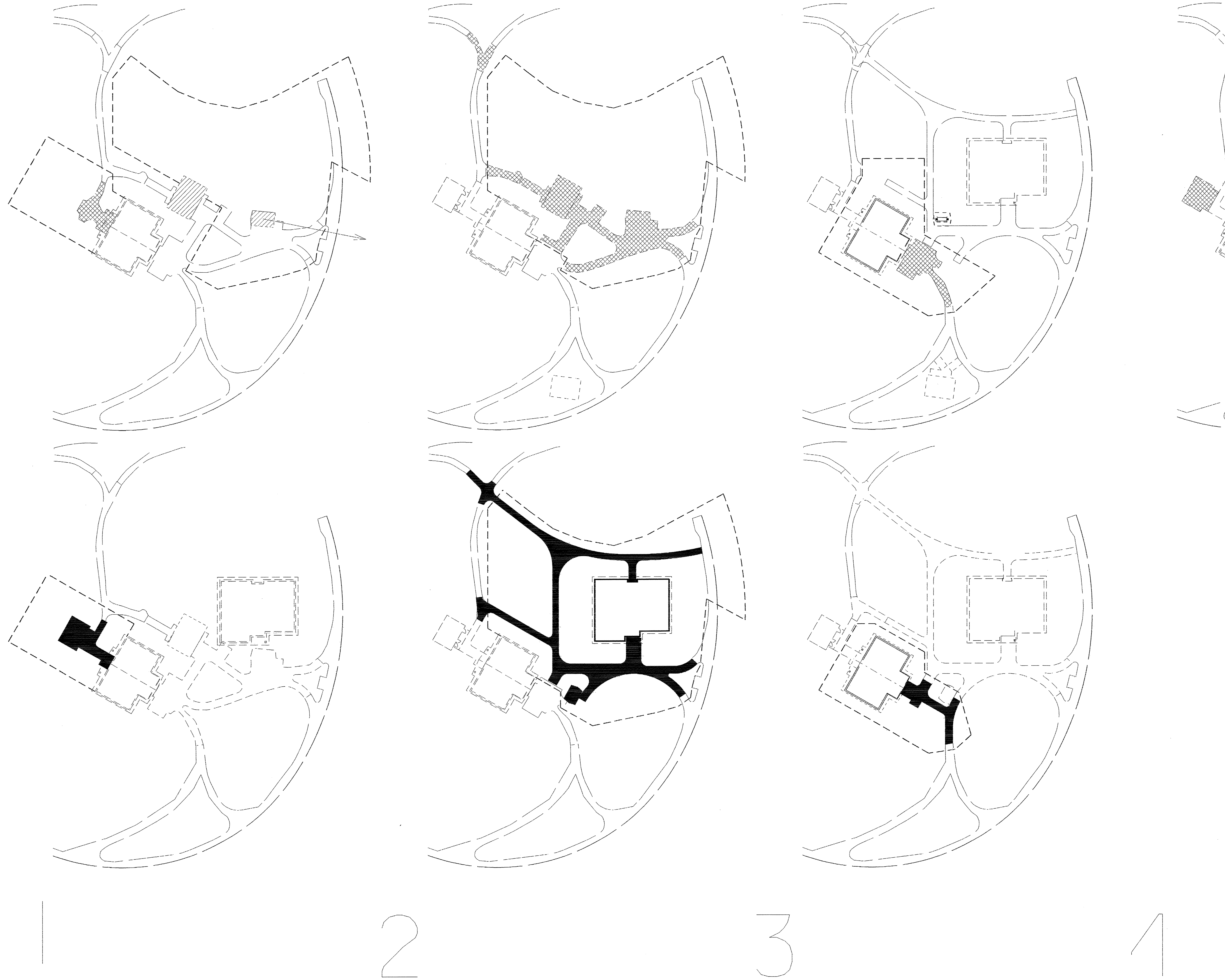
SHEET DESCRIPTION:

PREL. DESIGN DATE:	MAY 29, 2009
CHECKED BY & DATE:	
FINAL DESIGN DATE:	OCTOBER 27, 2009

I-40 EBL RENOVATION
EXISTING SITE PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LS-004
TOTAL SHEET NO:



CONSTRUCTION SEQUENCE NOTES:

PHASE

1 RELOCATE EXISTING VENDING BUILDING TO NEW TEMPORARY LOCATION. RELOCATE EXISTING DOUBLE PICNIC SHELTER TO NEW 14'X21' 6" REINFORCED CONCRETE PAD. REMOVE EXISTING SIDEWALK. INSTALL NEW SIDEWALK WITH HANDICAP RAMPS.

2 REMOVE EXISTING TREES, SIDEWALKS, SLABS, PADS, SITE FIXTURES, AND UTILITIES. CONSTRUCT NEW REST AREA BUILDING, SIDEWALKS, STORM DRAINAGE, UTILITIES, SHELTER, AND SITE FIXTURES.

3 REMOVE EXISTING SIDEWALKS, PADS, AND FIXTURES. RENOVATE EXISTING REST AREA TO VENDING/STORAGE AND INSTALL SIDEWALKS

4 REMOVE ORIGINAL VENDING BUILDING TO PERMANENT OFF-SITE LOCATION.

GENERAL

* INSTALL AND MAINTAIN CONSTRUCTION AND TREE PROTECTION FENCE TO ALLOW SAFE AND CONVENIENT PUBLIC USE OF RESTROOM AND VENDING FACILITIES, DURING ALL PHASES OF CONSTRUCTION.

* MAINTAIN A CLEAN, SECURE, AND SAFE WORKSITE.

20 10 0 20 40

$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
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I- 40 CATAWBA COUNTY
REST AREA RENOVATION WBL

PROJECT #: 39893.1.1

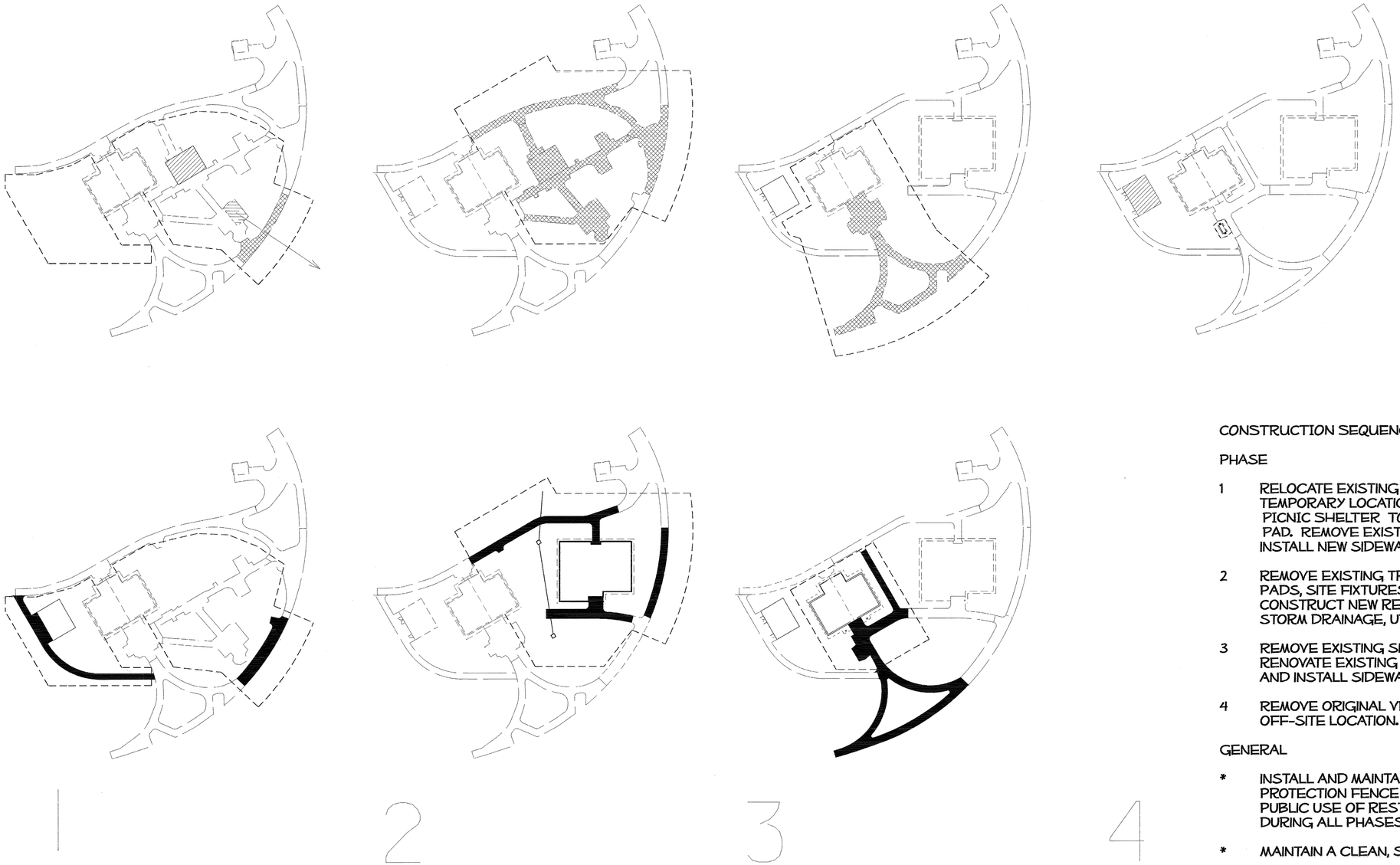
REU ENGINEER:
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

PREL. DESIGN DATE :	MAY 29, 2009
CHECKED BY & DATE :	
FINAL DESIGN DATE :	OCTOBER 27, 2009

I-40 WBL RENOVATION
PHASING PLAN

T.I.P. #	K-4907
WBS #	39893.3.ST1
FED I.D. #	STM-040-2(146)117
SHEET NO :	TOTAL SHEET NO :
LC-001	



CONSTRUCTION SEQUENCE NOTES:

PHASE

1 RELOCATE EXISTING VENDING BUILDING TO NEW TEMPORARY LOCATION. RELOCATE EXISTING DOUBLE PICNIC SHELTER TO NEW 14'X21' 6" REINFORCED CONCRETE PAD. REMOVE EXISTING SIDEWALK. INSTALL NEW SIDEWALK WITH HANDICAP RAMPS.

2 REMOVE EXISTING TREES, SIDEWALKS, SLABS, PADS, SITE FIXTURES, AND UTILITIES. CONSTRUCT NEW REST AREA BUILDING, SIDEWALKS, STORM DRAINAGE, UTILITIES, SHELTER, AND SITE FIXTURES.

3 REMOVE EXISTING SIDEWALKS, PADS, AND FIXTURES. RENOVATE EXISTING REST AREA TO VENDING/STORAGE AND INSTALL SIDEWALKS

4 REMOVE ORIGINAL VENDING BUILDING TO PERMANENT OFF-SITE LOCATION.

GENERAL

* INSTALL AND MAINTAIN CONSTRUCTION AND TREE PROTECTION FENCE TO ALLOW SAFE AND CONVENIENT PUBLIC USE OF RESTROOM AND VENDING FACILITIES, DURING ALL PHASES OF CONSTRUCTION.

* MAINTAIN A CLEAN, SECURE, AND SAFE WORKSITE.

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY
REST AREA RENOVATION EBL

PROJECT #: 39893.1.1

REU ENGINEER:

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

PREL. DESIGN DATE: MAY 29, 2009
CHECKED BY & DATE:
FINAL DESIGN DATE: OCTOBER 27, 2009

I-40 EBL RENOVATION
PHASING PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LC-002
TOTAL SHEET NO:

$$$$$$SYSTIME$$$$$$
$$$$$$SYSTIME$$$$$$
$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$$

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$$

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY REST AREA RENOVATION WBL

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/6/09

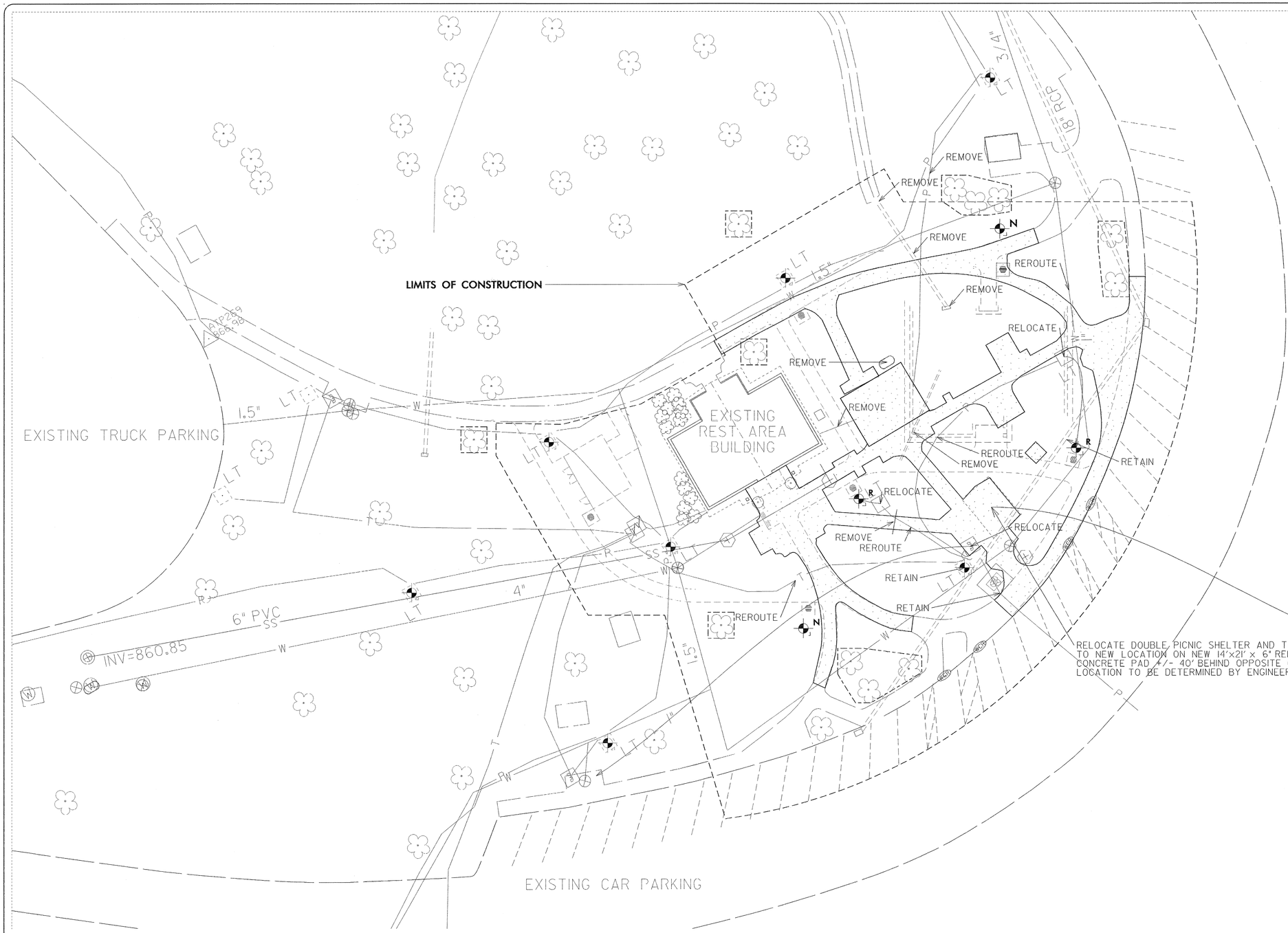
SHEET DESCRIPTION:

PREL. DESIGN DATE: MAY 29, 2009
CHECKED BY & DATE:
FINAL DESIGN DATE: OCTOBER 27, 2009

I-40 WBL RENOVATION
DEMOLITION PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LD-001
TOTAL SHEET NO:



LEGEND NOTES:

- CONSTRUCTION NOTE IDENTIFICATION
- PICNIC SHELTER & TABLE (HANDICAP)
- BENCH SEAT
- WASTE CONTAINER ON PAD
- DEPRESSED CURB
- 2 RAIL SPLIT RAIL FENCE
- POST TOP LIGHT TO REMAIN
- POST TOP LIGHT IN NEW LOCATION (2 New, 2 Relocated)
- SIDEWALK
- YARD HYDRANT
- RECYCLING CENTER
- TREE PROTECTION FENCE
- FLAGPOLE w/LIGHT

UG utility lines shown in approximate location for informational purpose only.

20 10 0 20 40

$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$$

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY
REST AREA RENOVATION EBL

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

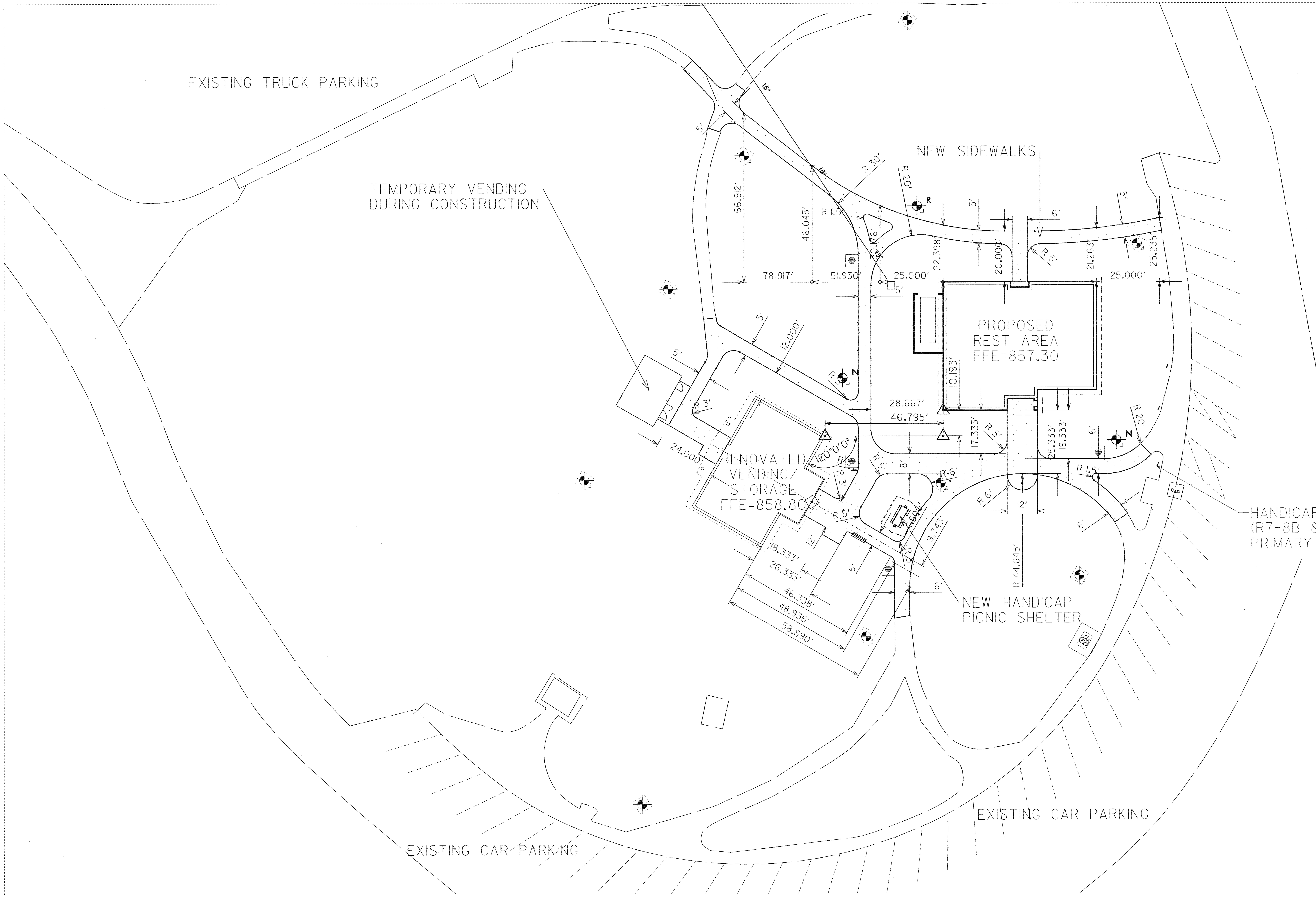
SHEET DESCRIPTION:

PREL. DESIGN DATE:	MAY 29, 2009
CHECKED BY & DATE:	
FINAL DESIGN DATE:	OCTOBER 27, 2009

I-40 EBL RENOVATION
DEMOLITION PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. #	K-4907
WBS #	39893.3.ST1
FED I.D. #	STM-040-2(146)117
SHEET NO:	LD-002
TOTAL SHEET NO:	



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HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY REST AREA RENOVATION WBL

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

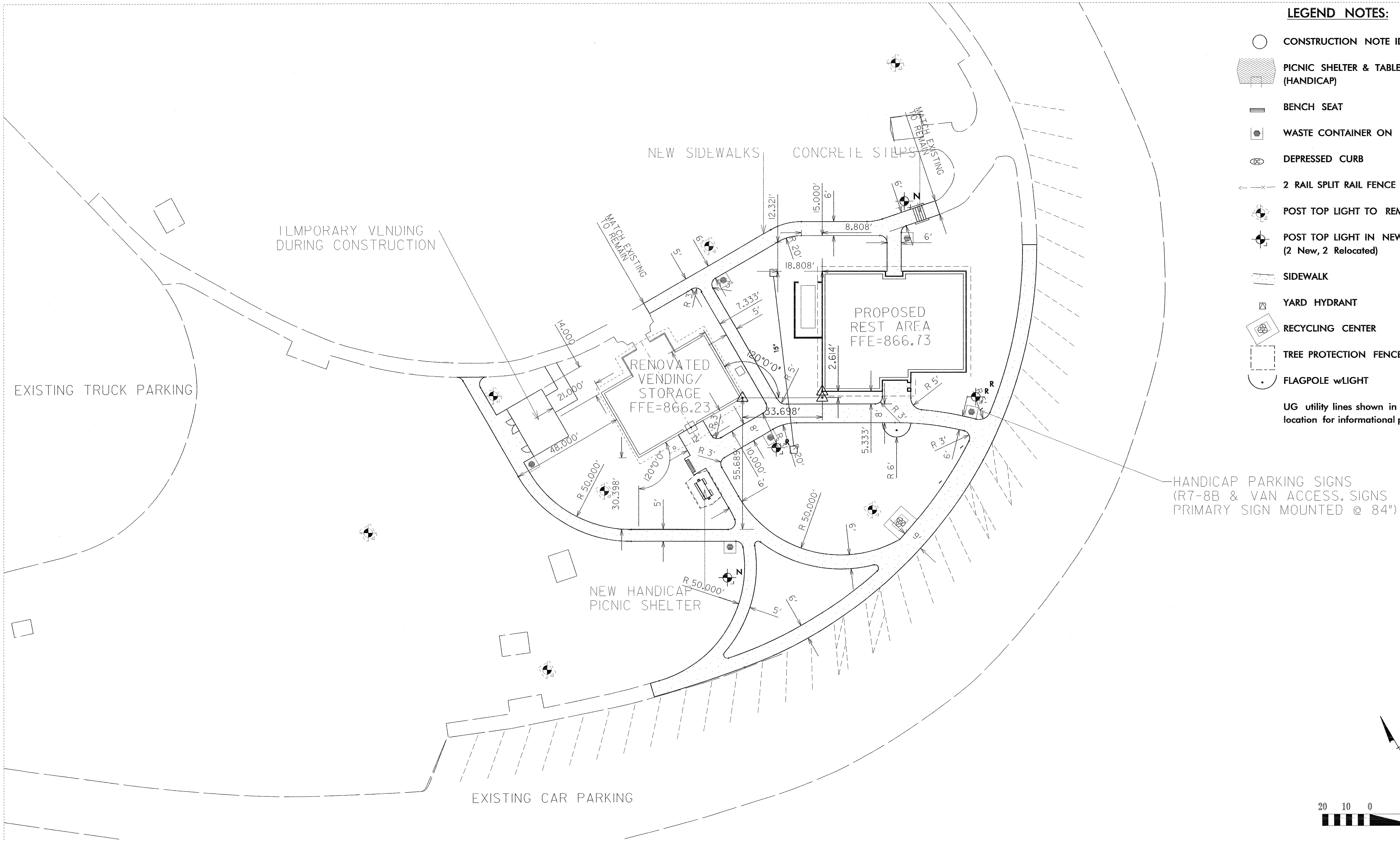
SHEET DESCRIPTION:

PREL. DESIGN DATE:	MAY 29, 2009
CHECKED BY & DATE:	
FINAL DESIGN DATE:	OCTOBER 27, 2009

I-40 WBL RENOVATION
LAYOUT PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LL-001
TOTAL SHEET NO:



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NCDOT - ROADSIDE ENVIRONMENTAL UNIT
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I- 40 CATAWBA COUNTY REST AREA RENOVATION EBL

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

PREL. DESIGN DATE: MAY 29, 2009
CHECKED BY & DATE:
FINAL DESIGN DATE: OCTOBER 27, 2009

I-40 EBL RENOVATION
LAYOUT PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LL-002
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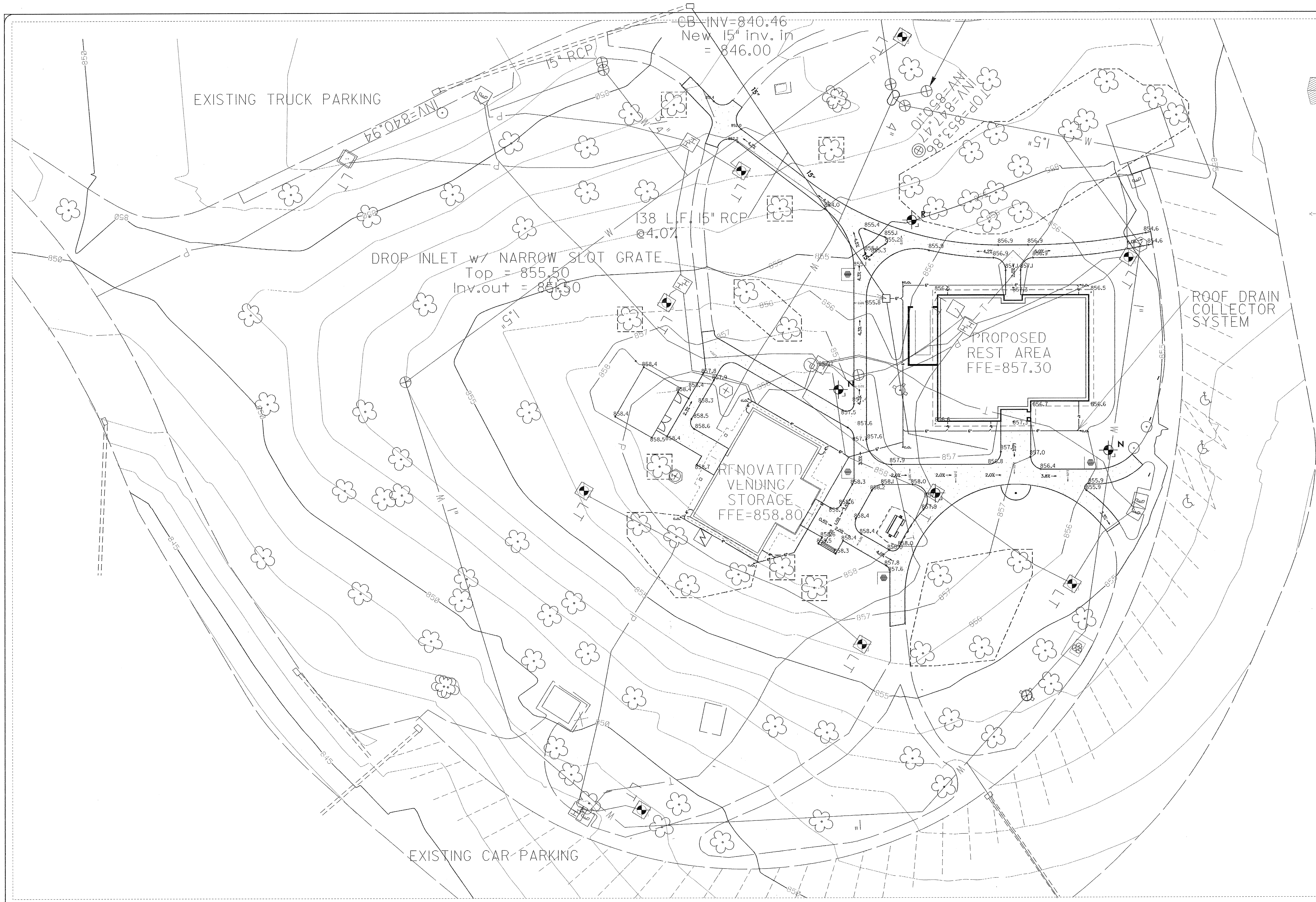

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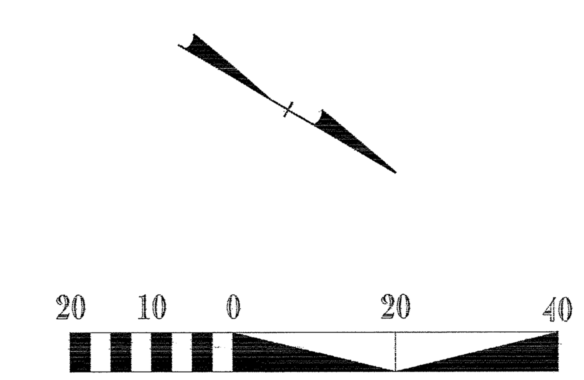

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$$$$USERNAME$$$$

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY
REST AREA RENOVATION WBL

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

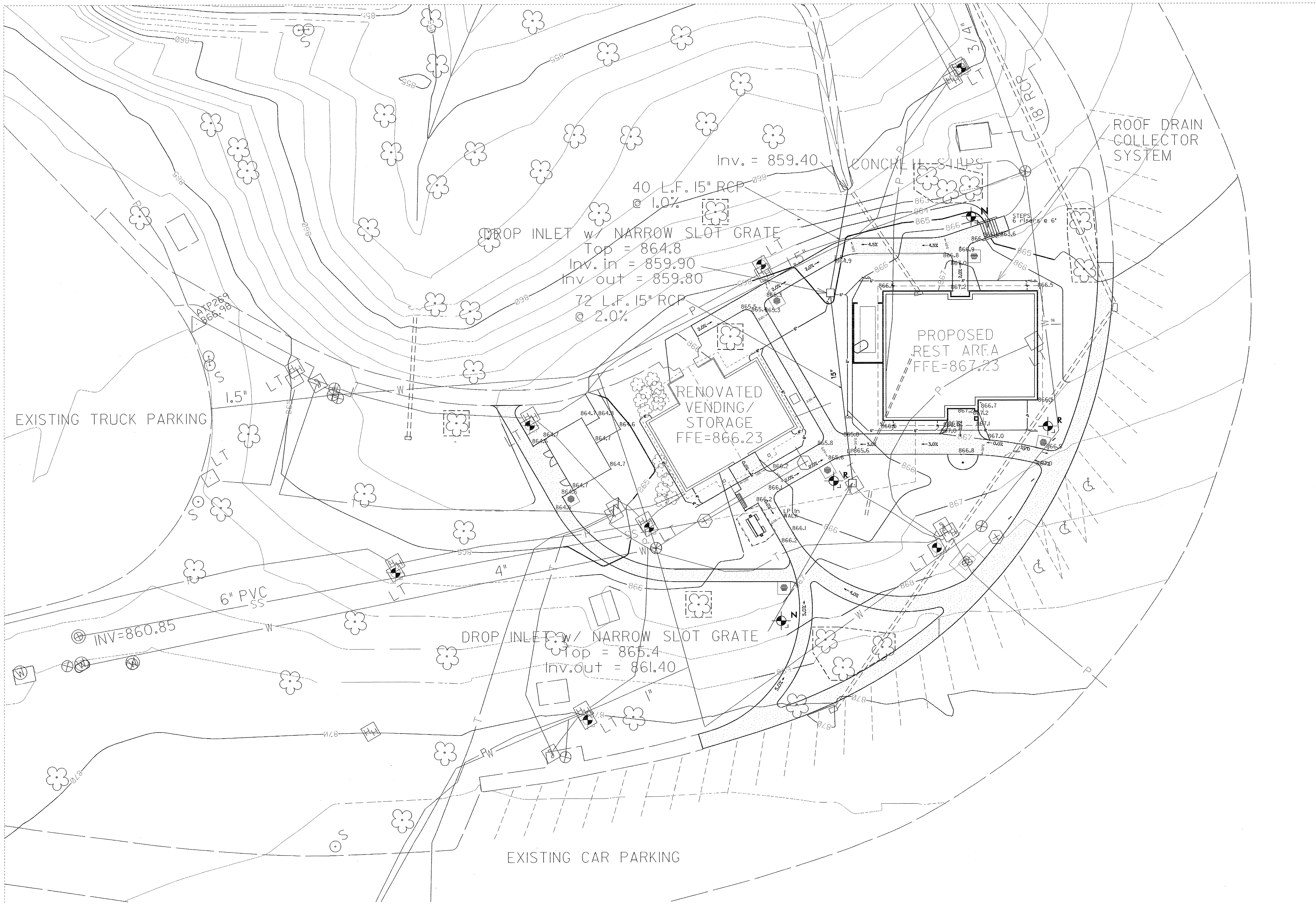
PREL. DESIGN DATE :	MAY 29, 2009
CHECKED BY & DATE :	
FINAL DESIGN DATE :	OCTOBER 27, 2009

I-40 WBL RENOVATION

GRADING PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. #	K-4907
WBS #	39893.3.ST1
FED I.D. #	STM-040-2(146)117
SHEET NO :	TOTAL SHEET NO :
LG-001	



LEGEND NOTES:

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- FLAGPOLE w/LIGHT

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NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 Catawba County Rest Area Renovation EBL

PROJECT #: 39893.1.1

REU ENGINEER

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

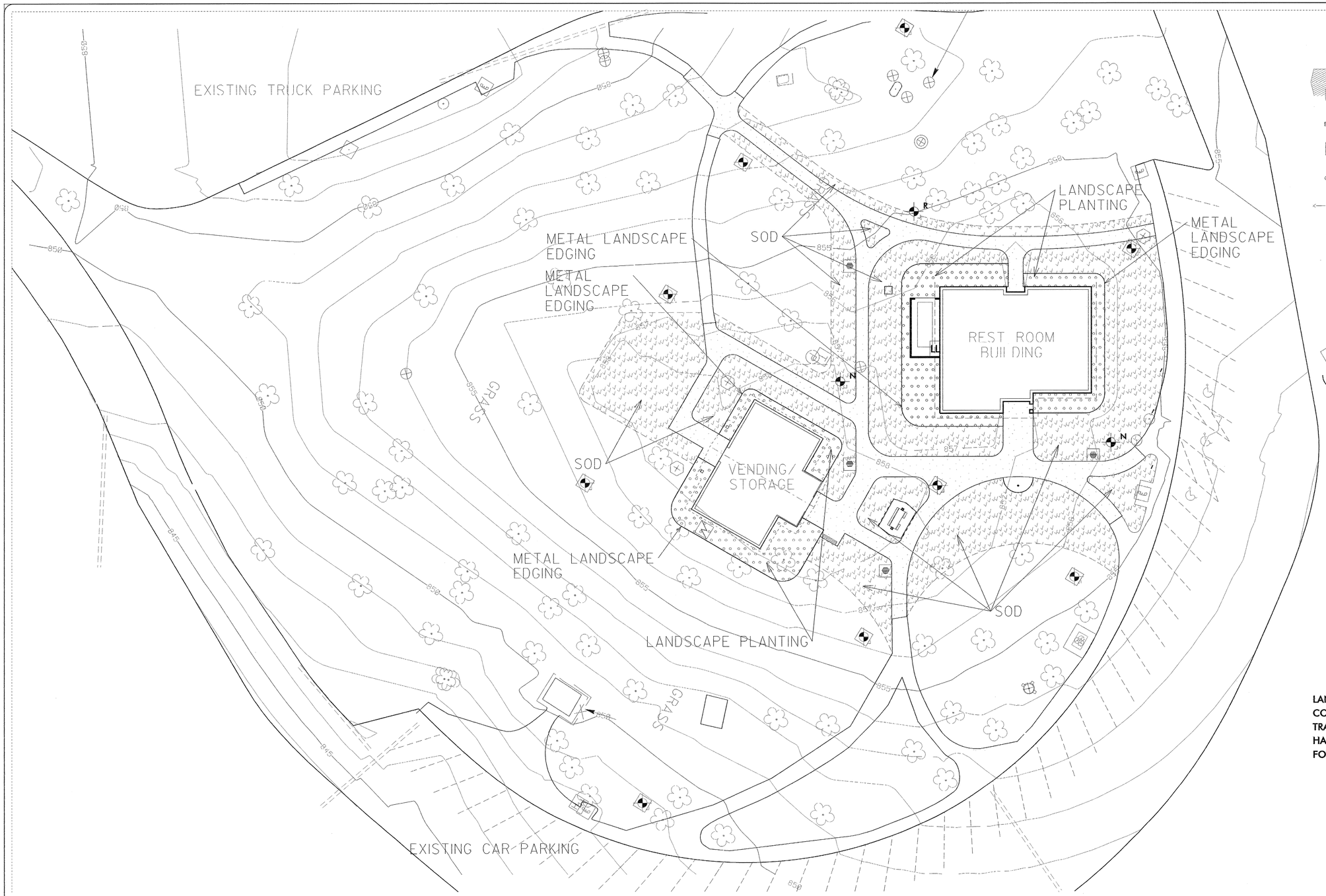
PREL. DESIGN DATE: MAY 29, 2009
CHECKED BY & DATE:
FINAL DESIGN DATE: OCTOBER 27, 2009

I-40 EBL RENOVATION
GRADING PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LG-002
TOTAL SHEET NO:

$$$$$SYSTIME$$$$$ $$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$ $$$$USERNAME$$$$



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LANDSCAPE LIGHTING INSTALLATION TO BE COORDINATED WITH LANDSCAPE PLANTING. TRANSFORMER BOX TO BE LOCATED IN AIR HANDLER ENCLOSURE. SEE SPECIFICATIONS FOR LIGHTING QUANTITIES AND DESCRIPTION

20 10 0 20 40

$$$$$$$$$$TIME$$$$$$
$$$$$$$$$$DATE$$$$$$
$$$$$$$$$$USERNAME$$$$$$

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY REST AREA RENOVATION WBL

PROJECT #: 39893.1.1

REV ENG: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 5/16/09

SHEET DESCRIPTION:

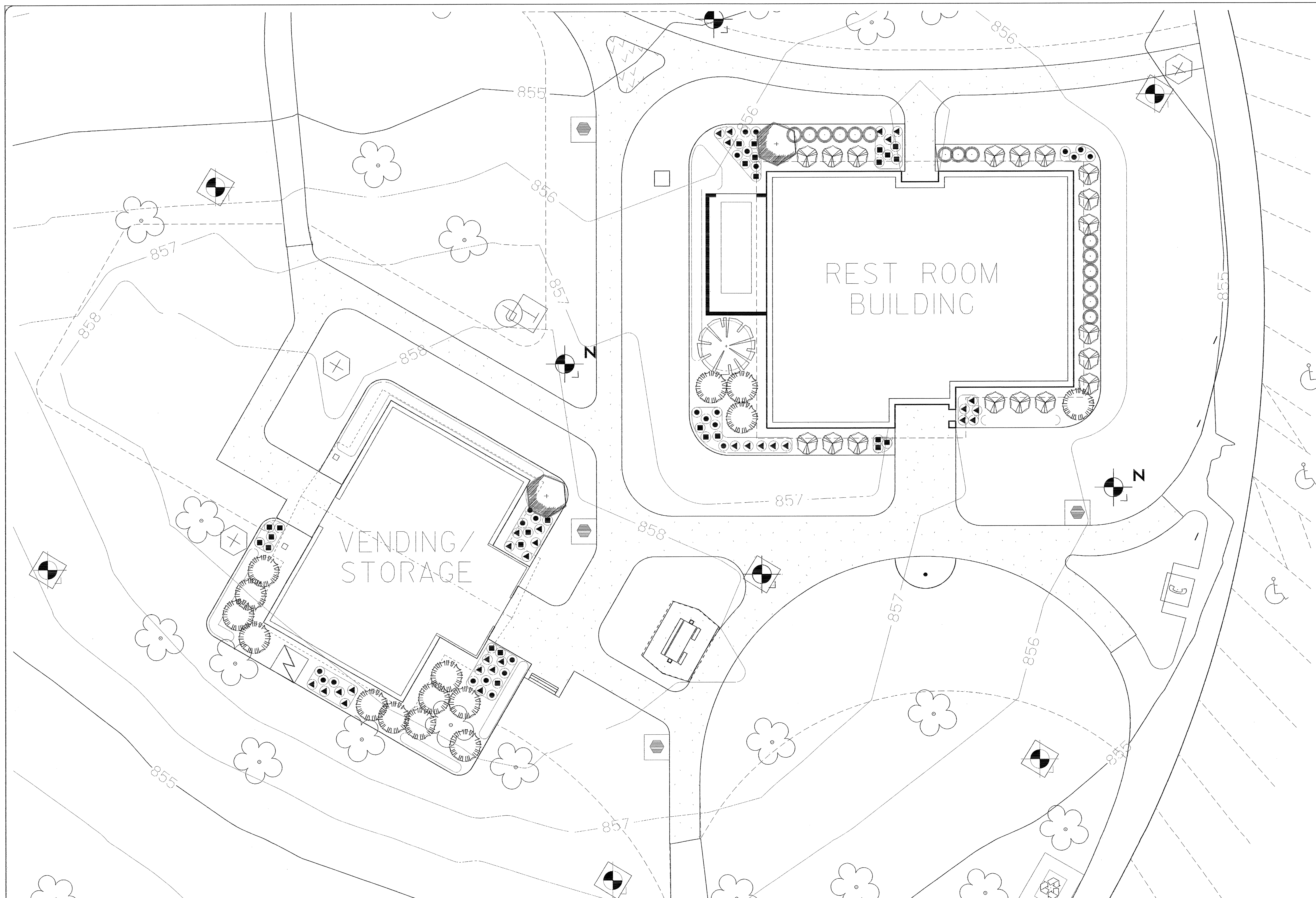
PREL DESIGN DATE:	MAY 29, 2009
CHECKED BY & DATE:	
FINAL DESIGN DATE:	OCTOBER 27, 2009

I-40 WBL RENOVATION

LANDSCAPE PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. #	K-4907
WBS #	39893.3.ST1
FED I.D. #	STM-040-2(146)117
SHEET NO:	LP-001
TOTAL SHEET NO:	



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- SIDEWALK
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- FLAGPOLE w/LIGHT

- Royal Star Magnolia 1
- Pink Muhly Grass 9
- Summer Snowflake Viburnum 2
- Knockout Pink Rose 12
- Dwarf Pink India Hawthorne 15
- Purple Coneflower 24
- Miss Huff Lantana 31
- Black-eyed Susan 25
- Black-eyed Stella Daylily 76

20 10 0 20 40

$$$$$$SYSTIME$$$$$
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$$$$$USERNAME$$$$

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY REST AREA RENOVATION WBL

PROJECT #: 39893.1.1

REU ENGINEER:

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

PREL. DESIGN DATE: MAY 29, 2009

CHECKED BY & DATE:

FINAL DESIGN DATE: OCTOBER 27, 2009

I-40 WBL RENOVATION

LANDSCAPE PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907

WBS # 39893.3.ST1

FED I.D. # STM-040-2(146)117

SHEET NO: LP-002

TOTAL SHEET NO:

NOTE : ALL UTILITY LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITHIN (48- HOURS)

NEW 3"-SDR-21 -PVC WATER LINE CONNECT TO EXISTING WATER LINE AND INSTALL DUCTILE IRON TEE AND GATE VALVE & BOX AS DIRECTED BY THE ENGINEER.

RELOCATED LIGHT

INSTALL NEW 6"-SDR-35-PVC SEWER LINE AND CONNECT TO EXISTING MAN-HOLE AS DIRECTED BY THE ENGINEER.

CONTRACTOR TO VERIFY INVERTS AND SEWER GRADES PRIOR TO INSTALLING BLDG. PLUMBING

TOP=853.86
INV=850.10
INV=847.47

INSTALL ELECTRIC SERVICE IN CONDUIT (30" DEEP) FROM NEW BLDG.TO EXISTING PAD MOUNTED ELECTRIC TRANSFORMER (SEE BUILDING ELECTRICAL PLAN ,THIS WORK IS PART OF BLDG. ELECTRICAL PAY ITEM ,SIZE COPPER CONDUCTORS FOR NEC CODE - FOR LOAD AND DISTANCE RUN)

INSTALL PHONE SERVICE IN 2" CONDUIT (10-PAIR / LEVEL-3) FROM EXISTING SERVICE BUILDING TO NEW BUILDING AND INSTALL PHONE SERVICE TO ALL EXISTING AND RELOCATED PAY TELEPHONES ON THE SITE

RELOCATE LIGHT POLE & CONCRETE FOUNDATION (ENGINEER TO LOCATE) INSTALL / RECONNECT CIRCUITRY AS DIRECTED

NEW LIGHT

NEW LIGHT

RELOCATE ELECTRICAL JUNCTION BOX FOR SITE LIGHTING EXACT LOCATION TO BE COORDINATED IN THE FIELD (+-15') INSTALL / RECONNECT CIRCUITRY AS NEEDED AND DIRECTED BY THE ENGINEER

TEMP VEND

RELOCATED TEMPORARY VENDING BUILDING ,INSTALL CONCRETE PAD, ELECTRIC SERVICE -FROM EXISTING SERVICE BLDG. AND CONNECT TO CLOSEST WATER LINE.

REMOVE EXISTING VENDING BUILDING ,CONCRETE PAD, AND ELECTRIC SERVICE WIRE TO OLD SERVICE BLDG.

INSTALL NEW LIGHT POLE & CONCRETE FOUNDATION (ENGINEER TO LOCATE) INSTALL /CONNECT CIRCUITRY AS DIRECTED

NOTE: THE CONTRACTOR SHALL LOCATE & MOVE ANY CONFLICT UTILITIES AS PART OF THIS CONTRACT. THE LOCATIONS SHOWN ARE APPROXIMATE.

TRUCK PARKING

PROPOSED BUILDING FFE=857.30

EXISTING BUILDING FFE=858.80

CONC

CAR PARKING

CAR PARKING

LT

NORTH

20 10 0 20 40

KEY

LT ●	POST TOP LIGHT
WV ⊕	WATER VALVE BOX
— W —	WATER LINE
MH ◎	SEWER MANHOLE
— SS —	SEWER LINE
— P —	POWER LINE
—SD—	STORM DRAIN LINE
— E —	ELECTRICAL SERVICE LINE
— T —	TELEPHONE SERVICE LINE
T	LANDSCAPE LIGHT TRANSFORMER
E.LT	ELECTRICAL LIGHT CIRCUIT
⊗	SS / STORM DRAIN -CLEANOUT
HW	DRAIN PIPE HEADWALL
CB	DRAINAGE CATH BASIN
DI	DRAINAGE DROP INLET
E	PAY-TELEPHONE BOOTH

NCDOT - ROADSIDE ENVIRONMENTAL UNIT

LANDSCAPE DESIGN & DEVELOPMENT

1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557

PH: 919-733-2920 FAX: 919-733-9810

HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY REST AREA RENOVATION WBL

PROJECT #: K-4907

REU ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028878 ENGINEER KENNETH D. PACE

SHEET DESCRIPTION:

PREL. DESIGN DATE : MAY 29 , 2009

CHECKED BY & DATE :

FINAL DESIGN DATE : OCTOBER 27, 2009

I-40 WESTBOUND

SITE UTILITY PLAN

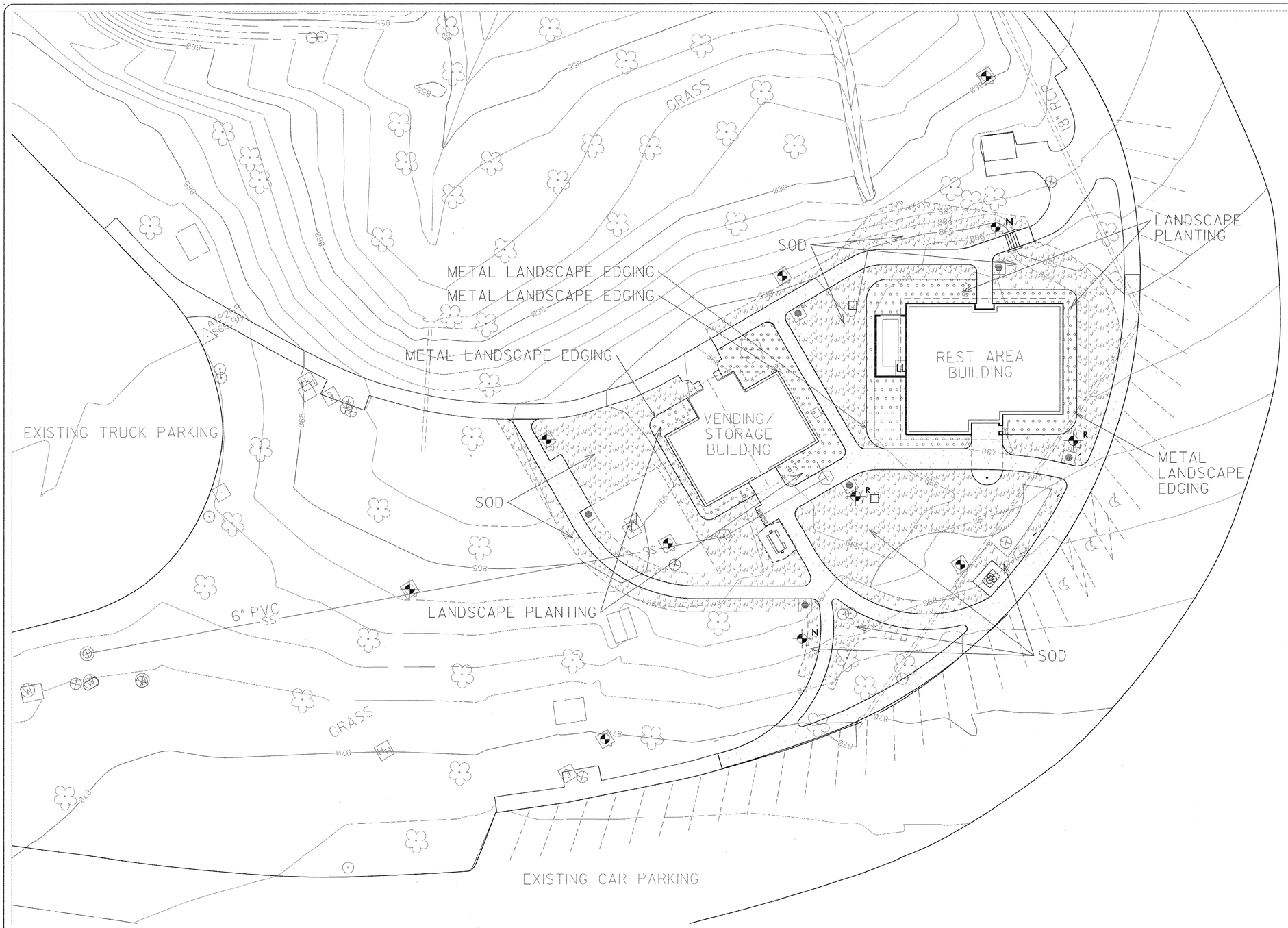
T.I.P. # K-4907

WBS # 39893. 3 .ST 1

FED I.D. # STM-040-2 (146) 117

SHEET NO : LU -00 1

TOTAL SHEET NO :



LEGEND NOTES:

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- WASTE CONTAINER ON PAD
- DEPRESSED CURB
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- FLAGPOLE w/LIGHT

UG utility lines shown in approximate location for informational purpose only.

LANDSCAPE LIGHTING INSTALLATION TO BE COORDINATED WITH LANDSCAPE PLANTING. TRANSFORMER BOX TO BE LOCATED IN AIR HANDLER ENCLOSURE. SEE SPECIFICATIONS FOR LIGHTING QUANTITIES AND DESCRIPTION

20 10 0 20 40

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$SYSSTYLE$$$$$$
$$$$$$USERNAME$$$$$$ONS$$$$$$$$$$$$$$$$$$$$

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY REST AREA RENOVATION EBL

PROJECT #: 39893.1.1

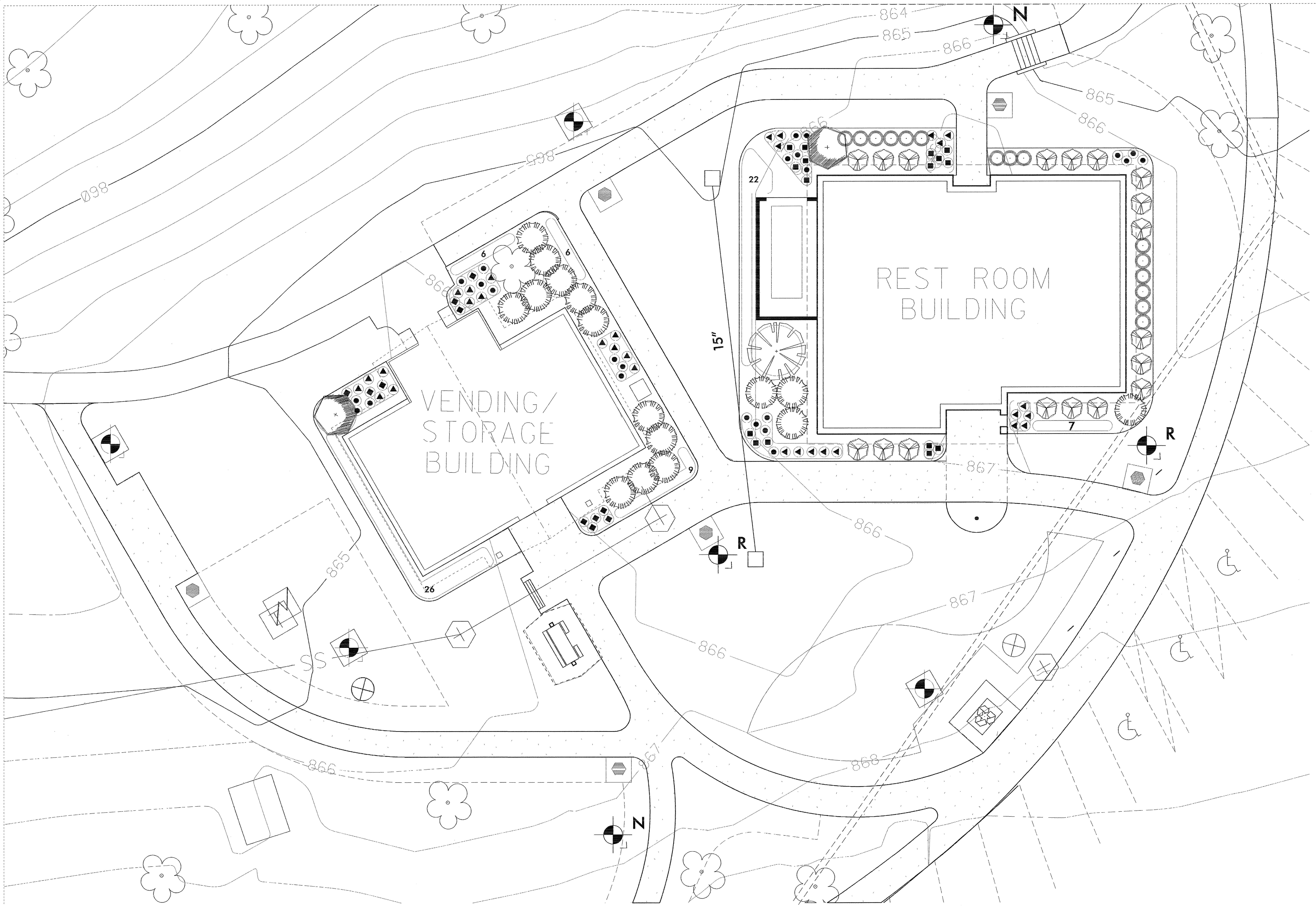
REG ENGINEER: NORTH CAROLINA REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

PREL DESIGN DATE: MAY 29, 2009	I-40 EBL RENOVATION
CHECKED BY & DATE:	LANDSCAPE PLAN
FINAL DESIGN DATE: OCTOBER 27, 2009	

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LP-003
TOTAL SHEET NO:



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- Miss Huff Lantana 31
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20 10 0 20 40

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
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I- 40 CATAWBA COUNTY REST AREA RENOVATION EBL

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

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I-40 EBL RENOVATION
LANDSCAPE PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LP-004
TOTAL SHEET NO:

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$$$$USERNAME$$$$

NOTE : ALL UTILITY LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITHIN (48- HOURS)

REMOVE EXISTING VENDING BUILDING ,CONCRETE PAD, AND ELECTRIC SERVICE WIRE TO OLD SERVICE BLDG.

INSTALL ELECTRIC SERVICE IN CONDUIT (30" DEEP) FROM NEW BLDG.TO EXISTING PAD MOUNTED ELECTRIC TRANSFORMER (SEE BUILDING ELECTRICAL PLAN ,THIS WORK IS PART OF BLDG. ELECTRICAL PAY ITEM ,SIZE COPPER CONDUCTORS FOR NEC CODE – FOR LOAD AND DISTANCE RUN)

INSTALL PHONE SERVICE IN 2" CONDUIT (10–PAIR / LEVEL–3) FROM EXISTING SERVICE BUILDING TO NEW BUILDING AND INSTALL PHONE SERVICE TO ALL EXISTING AND RELOCATED PAY TELEPHONES ON THE SITE

INSTALL NEW LIGHT POLE & CONCRETE FOUNDATION (ENGINEER TO LOCATE) INSTALL /CONNECT CIRCUITRY AS DIRECTED

NEW LIGHT

RELOCATED LIGHT

RELOCATE LIGHT POLES & CONCRETE FOUNDATIONS (ENGINEER TO LOCATE) INSTALL / RECONNECT CIRCUITRY AS DIRECTED

RELOCATED TEMPORARY VENDING BUILDING ,INSTALL CONCRETE PAD, ELECTRIC SERVICE –FROM EXISTING SERVICE BLDG. AND CONNECT TO CLOSEST WATER LINE.

RELOCATED LIGHT

INSTALL NEW 6"–SDR–35– PVC SEWER LINE AND CONNECT TO EXISTING MAN–HOLE AS DIRECTED BY THE ENGINEER.

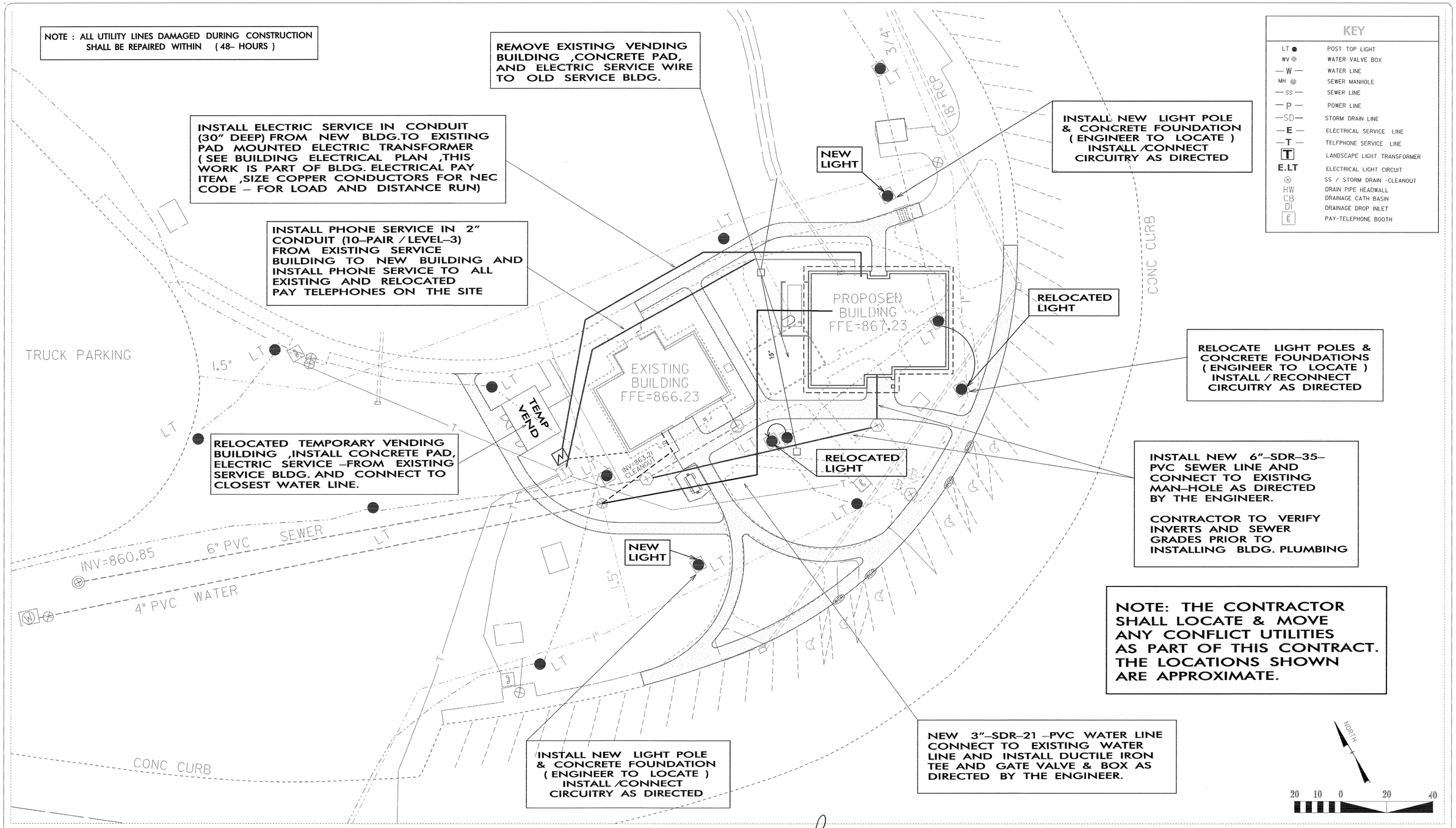
CONTRACTOR TO VERIFY INVERTS AND SEWER GRADES PRIOR TO INSTALLING BLDG. PLUMBING

NEW LIGHT

NOTE: THE CONTRACTOR SHALL LOCATE & MOVE ANY CONFLICT UTILITIES AS PART OF THIS CONTRACT. THE LOCATIONS SHOWN ARE APPROXIMATE.

NEW 3"–SDR–21 –PVC WATER LINE CONNECT TO EXISTING WATER LINE AND INSTALL DUCTILE IRON TEE AND GATE VALVE & BOX AS DIRECTED BY THE ENGINEER.

INSTALL NEW LIGHT POLE & CONCRETE FOUNDATION (ENGINEER TO LOCATE) INSTALL /CONNECT CIRCUITRY AS DIRECTED



KEY

LT ●	POST TOP LIGHT
WV ⊕	WATER VALVE BOX
— W —	WATER LINE
MH	SEWER MANHOLE
— SS —	SEWER LINE
— P —	POWER LINE
—SD—	STORM DRAIN LINE
— E —	ELECTRICAL SERVICE LINE
— T —	TELEPHONE SERVICE LINE
T	LANDSCAPE LIGHT TRANSFORMER
E.LT	ELECTRICAL LIGHT CIRCUIT
⊗	SS / STORM DRAIN -CLEANOUT
HW	DRAIN PIPE HEADWALL
CB	DRAINAGE CATH BASIN
DI	DRAINAGE DROP INLET
	PAY-TELEPHONE BOOTH

NCDOT - ROADSIDE ENVIRONMENTAL UNIT

LANDSCAPE DESIGN & DEVELOPMENT

1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557

PH: 919-733-2920 FAX: 919-733-9810

HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY REST AREA RENOVATION EBL

PROJECT #: K-4907

REU ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028878 ENGINEER KENNETH D. PAGE

11/16/09

SHEET DESCRIPTION:

PREL. DESIGN DATE : MAY 29, 2009

CHECKED BY & DATE :

FINAL DESIGN DATE : OCTOBER 27, 2009

I-40 EASTBOUND

SITE UTILITY PLAN

T.I.P. # K-4907

WBS # 39893. 3 .ST 1

FED I.D. # STM-040-2 (146) 117

SHEET NO : L U -002

TOTAL SHEET NO :

CATAWBA COUNTY I/40 REST AREA RENOVATION
PLANTING - SUMMARY OF QUANTITIES

WBL- LANDSCAPE QUANTITIES

Des	Sec	Qty.	Unit	Key	Botanical Name	Common Name	Size	Caliper	Furnish	A.S.N.S.	Remarks
L	1670	**24**	ea	HAL	*Echinacea purpurea 'Magnus'*	Purple Coneflower			#1 cont.		As Shown
L	1670	**76**	ea	HZ	*Hemerocallis 'Black eyed Stella'*	Black eyed Stella Daylily	3 fan		#1 cont.	12.2.3	2' O.C.
L	1670	**1**	ea	LPO	*Magnolia stellata 'Royal Star'*	Royal Star Magnolia	4-5'		# 15 cont.	1.3	3-4 stem
L	1670	**31**	ea	LH	*Lantana camera "Miss Huff"*	Miss Huff Lantana	15-18"		#1 cont.	2.2.3	4 canes
L	1670	**9**	ea	MC	*Muhlenbergia capillaris*	Pink Muhley Grass			#1 cont.	12.4	2' O.C.
L	1670	**15**	ea	RU	*Raphiolepsis umbellata 'Pinkie'*	Dwarf Pink India Hawthorn	18-24"		#3 cont.	4.2.2	As Shown
L	1670	**12**	ea	RR	*Rosa x 'Knock-out' Radtkopink*	Knock Out Pink Rose	18-24"		#3 cont.	5.2	3 canes
L	1670	**25**	ea	VHP	*Rudbeckia 'Golstrum'*	Black-eyed Susan			#1 cont.	12.3	18" O.C.
L	1670	**2**	ea	VPM	*Viburnum plicatum tomentosum 'Summer Snowflake'*	Summer Snowflake Viburnum	3-4'		#15 cont.	2.2.4	As Shown
2729	1670	**36**	CY		Mulch for Planting						
L	1670	**336**	SY		Post emergence Herbicidal Treatment						
L	1670	**1336**	SY		Sod						

EBL - LANDSCAPE QUANTITIES

Des	Sec	Qty.	Unit	Key	Botanical Name	Common Name	Size	Caliper	Furnish	A.S.N.S.	Remarks
L	1670	**24**	ea	HAL	*Echinacea purpurea 'Magnus'*	Purple Coneflower			#1 cont.		As Shown
L	1670	**76**	ea	HZ	*Hemerocallis 'Black eyed Stella'*	Black eyed Stella Daylily	3 fan		#1 cont.	12.2.3	2' O.C.
L	1670	**1**	ea	LPO	*Magnolia stellata 'Royal Star'*	Royal Star Magnolia	4-5'		# 15 cont.	1.3	3-4 stem
L	1670	**31**	ea	LH	*Lantana camera "Miss Huff"*	Miss Huff Lantana	15-18"		#1 cont.	2.2.3	4 canes
L	1670	**9**	ea	MC	*Muhlenbergia capillaris*	Pink Muhley Grass			#1 cont.	12.4	2' O.C.
L	1670	**16**	ea	RU	*Raphiolepsis umbellata 'Pinkie'*	Dwarf Pink India Hawthorn	18-24"		#3 cont.	4.2.2	As Shown
L	1670	**12**	ea	RR	*Rosa x 'Knock-out' Radtkopink*	Knock Out Pink Rose	18-24"		#3 cont.	5.2	3 canes
L	1670	**24**	ea	VHP	*Rudbeckia 'Golstrum'*	Black-eyed Susan			#1 cont.	12.3	18" O.C.
L	1670	**2**	ea	VPM	*Viburnum plicatum tomentosum 'Summer Snowflake'*	Summer Snowflake Viburnum	3-4'		#15 cont.	2.2.4	As Shown
2729	1670	**36**	CY		Mulch for Planting						
L	1670	**336**	SY		Post emergence Herbicidal Treatment						
L	1670	**1345**	SY		Sod						

"LANDSCAPE PLANTING" - FURNISH, DELIVER, PLANT BED PREPARATION AND THE PLANTING OF TREES, SHRUBS, GROUND COVERS, BEDDING PLANTS AND SEEDLINGS AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED , IN ACCORDANCE TO NCDOT STANDARD SPECIFICATION 1670.

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
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HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY
REST AREA RENOVATION EBL

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

PREL. DESIGN DATE : MAY 29, 2009

CHECKED BY & DATE :

FINAL DESIGN DATE : OCTOBER 27, 2009

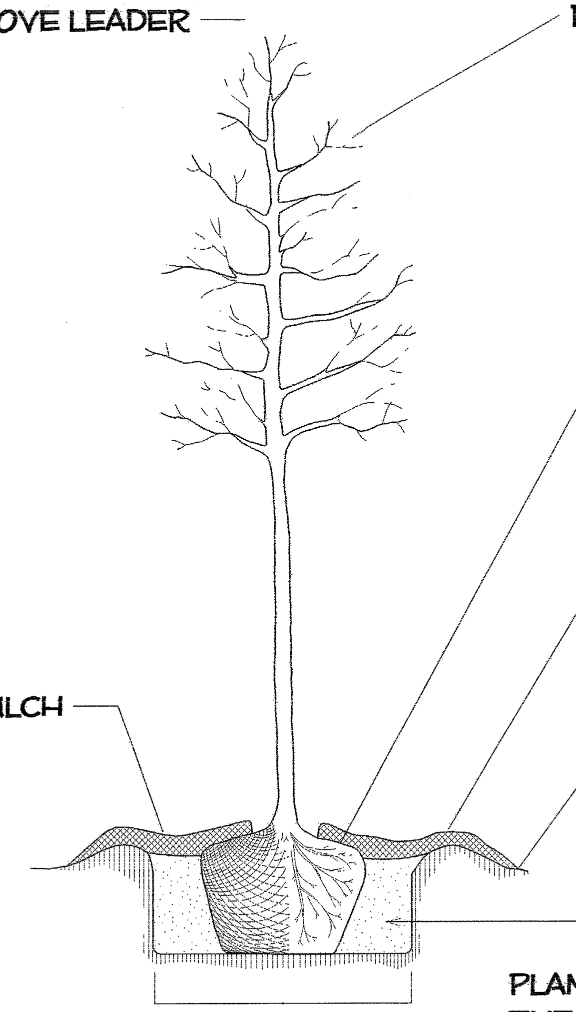
PLANTING DETAILS

SUMMARY OF QUANTITIES

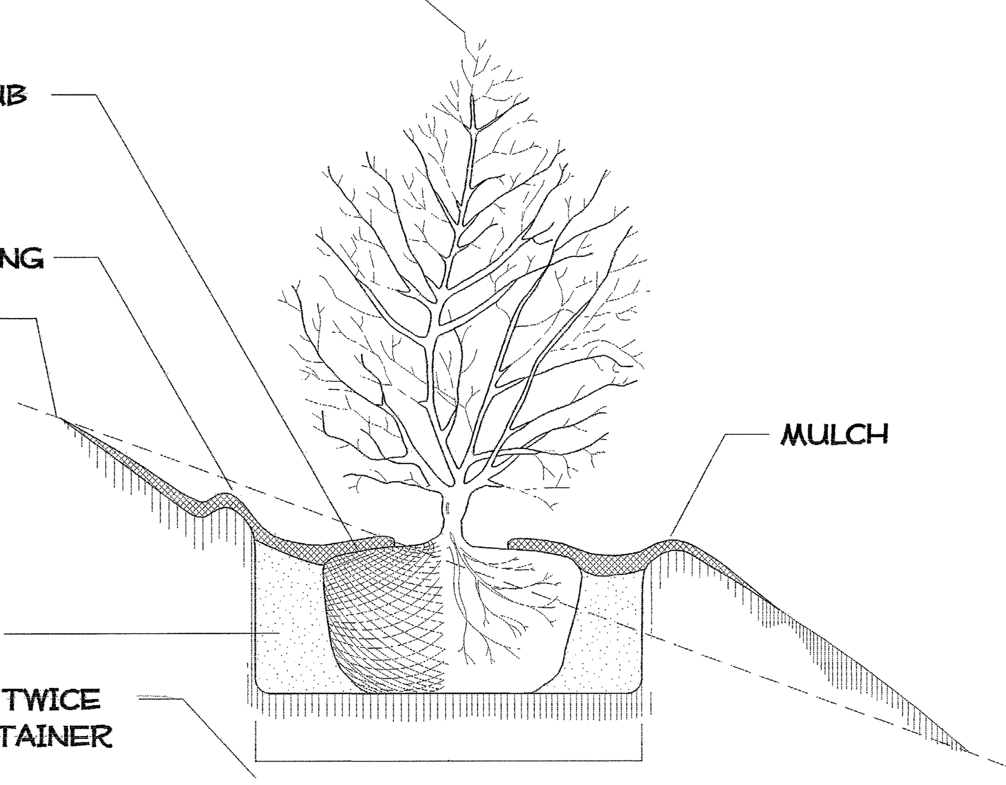
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. #: K-4907
WBS #: 39893.3.ST1
FED I.D. #: STM-040-2(146)117
SHEET NO : LP-005
TOTAL SHEET NO :

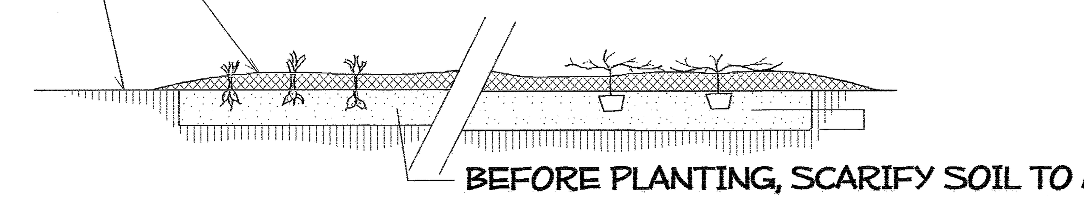
$$$$$$SYSTIME$$$$$ $$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$ $$$$USERNAME$$$$



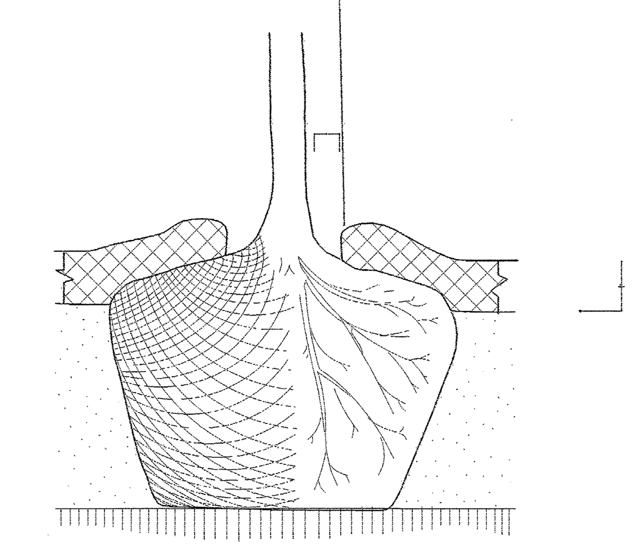
TREE OR SHRUB PLANTING DETAIL
(LEVEL GROUND)



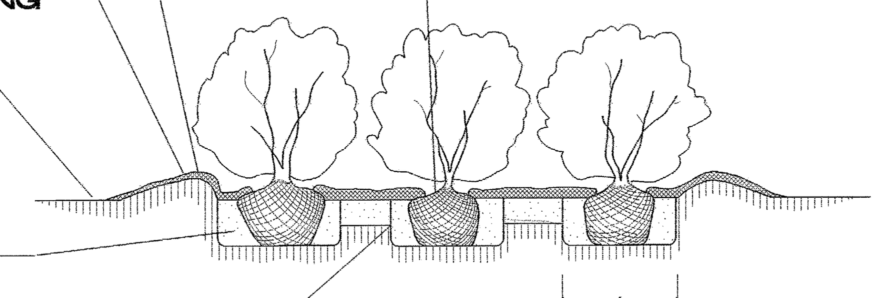
TREE OR SHRUB PLANTING DETAIL
(SLOPING GROUND)



GROUND COVER/ BEDDING PLANT DETAIL



MULCH DETAIL

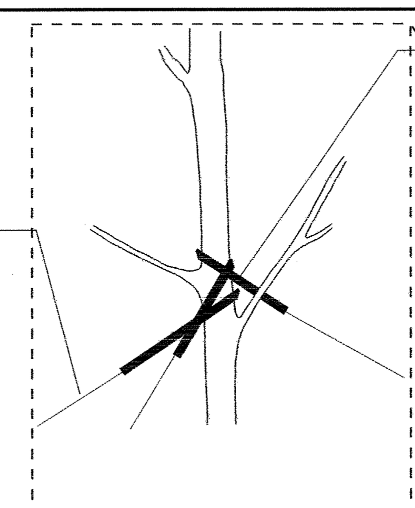


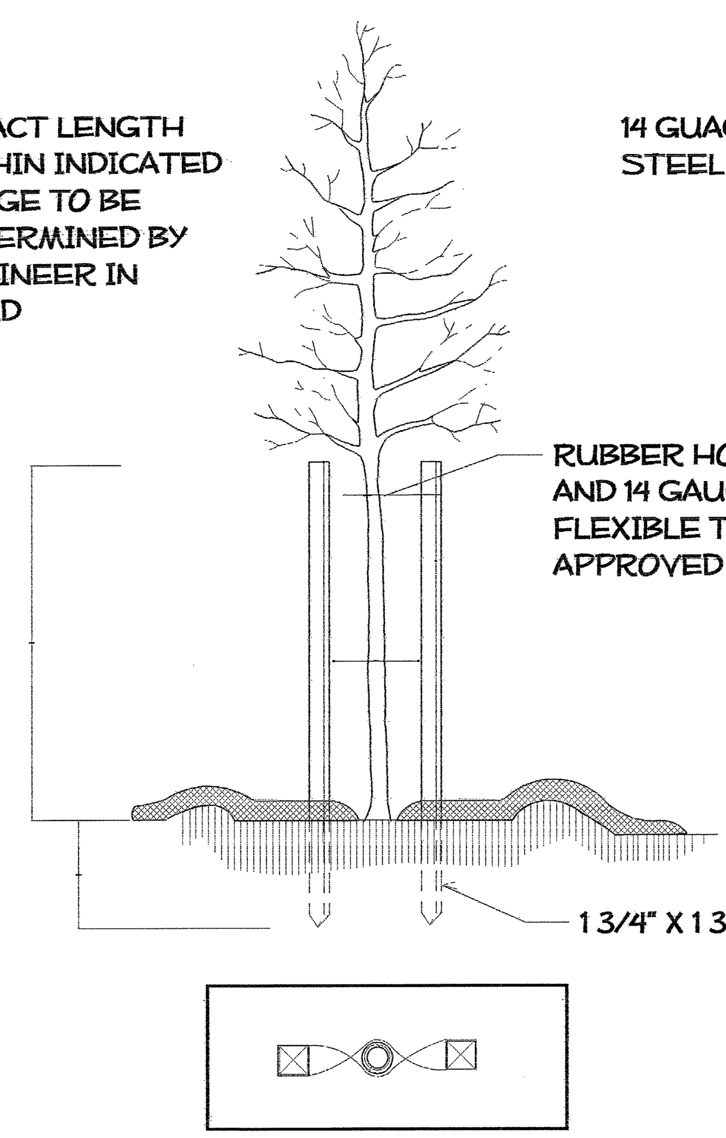
SHRUB BED PLANTING DETAIL

NOTES:

- SCHEDULE FOR PLANT HOLE SIZE: PLANT HOLE WIDTH (X) TO BE TWICE THE ROOT BALL SIZE OR CONTAINER DIAMETER.
- SEE STANDARD SPECIFICATIONS FOR PLANT BED FUMIGATION AND HERBICIDAL TREATMENT.
- APPLY FERTILIZER AT PLANTING TIME IN THE FORM OF A SLOW RELEASE PELLET OR TABLET. APPLY AT RATE RECOMMENDED BY MANUFACTURER. BOTH RATE AND FORMULATION MUST BE APPROVED BY FIELD ENGINEER PRIOR TO APPLICATION.
- REMOVE WIRE BASKET AND FOLD BURLAP BACK FROM TOP OF ROOT BALL BEFORE BACKFILLING IS COMPLETE.
- ALL PRUNING TO FOLLOW STANDARD ARBORICULTURAL PRACTICES AS SPECIFIED BY INTERNATIONAL SOCIETY OF ARBORICULTURE.
- DO NOT ATTEMPT TO STRAIGHTEN A TREE THAT HAS BEEN PLANTED AT AN ANGLE WITH THE USE OF STAKING OR GUYING. DIG TREE AND REPLANT TO UPRIGHT POSITION.

GUY TIE DETAIL

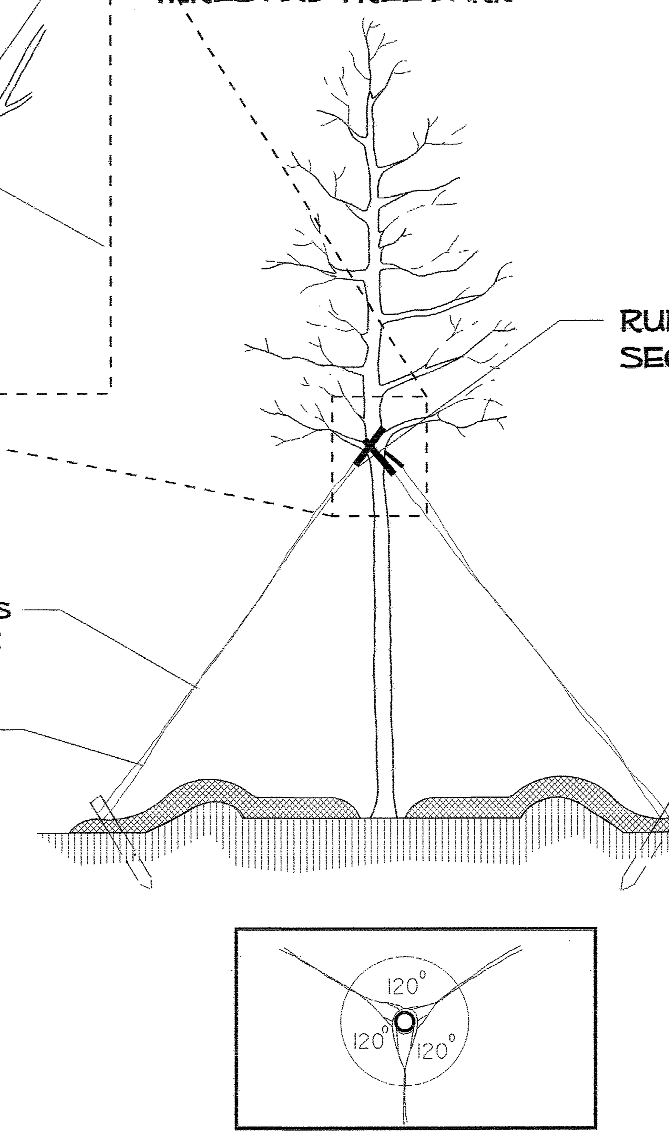




PLAN VIEW

STAKING DETAIL
(TREES 6'-10')

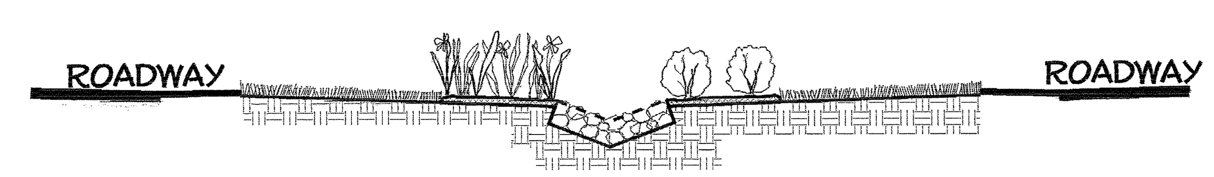
USE AS DIRECTED BY FIELD ENGINEER



PLAN VIEW

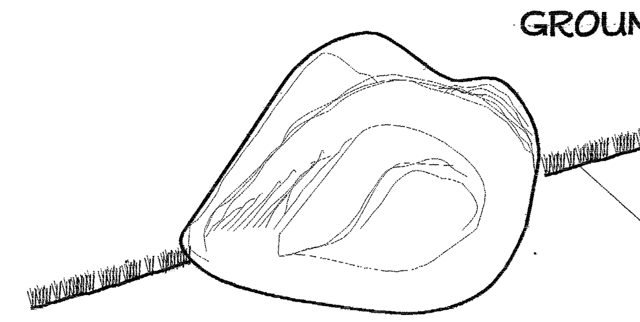
GUYING DETAIL
(TREES 10' OR LARGER)

USE AS DIRECTED BY FIELD ENGINEER

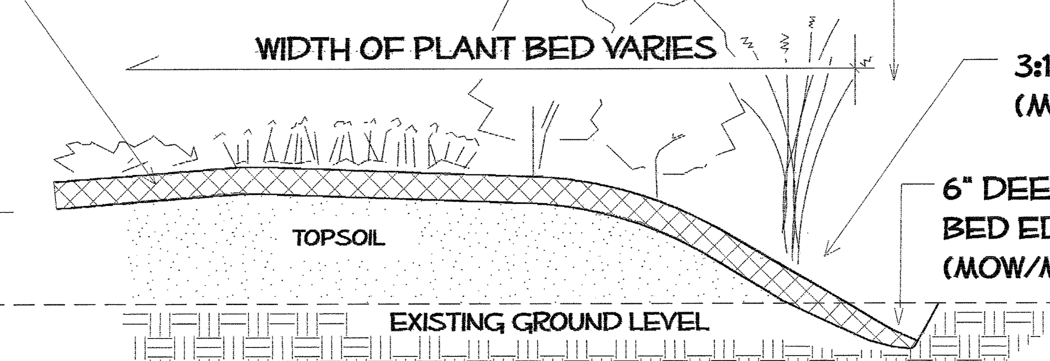


WASHED RIVER STONE (MIN. 2 INCH - MAX 6 INCH DIAM) ON FILTER FABRIC LINER IN DITCH. PLACE STONE FLUSH WITH DITCH GRADE FOR MAXINUM WATER FLOW.

RIVERSTONE DITCH LINING DETAIL



BOULDER PLACEMENT DETAIL TYPICAL



PLANT BED EDGE DETAIL

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
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I- 40 CATAWBA COUNTY
REST AREA RENOVATION EBL

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

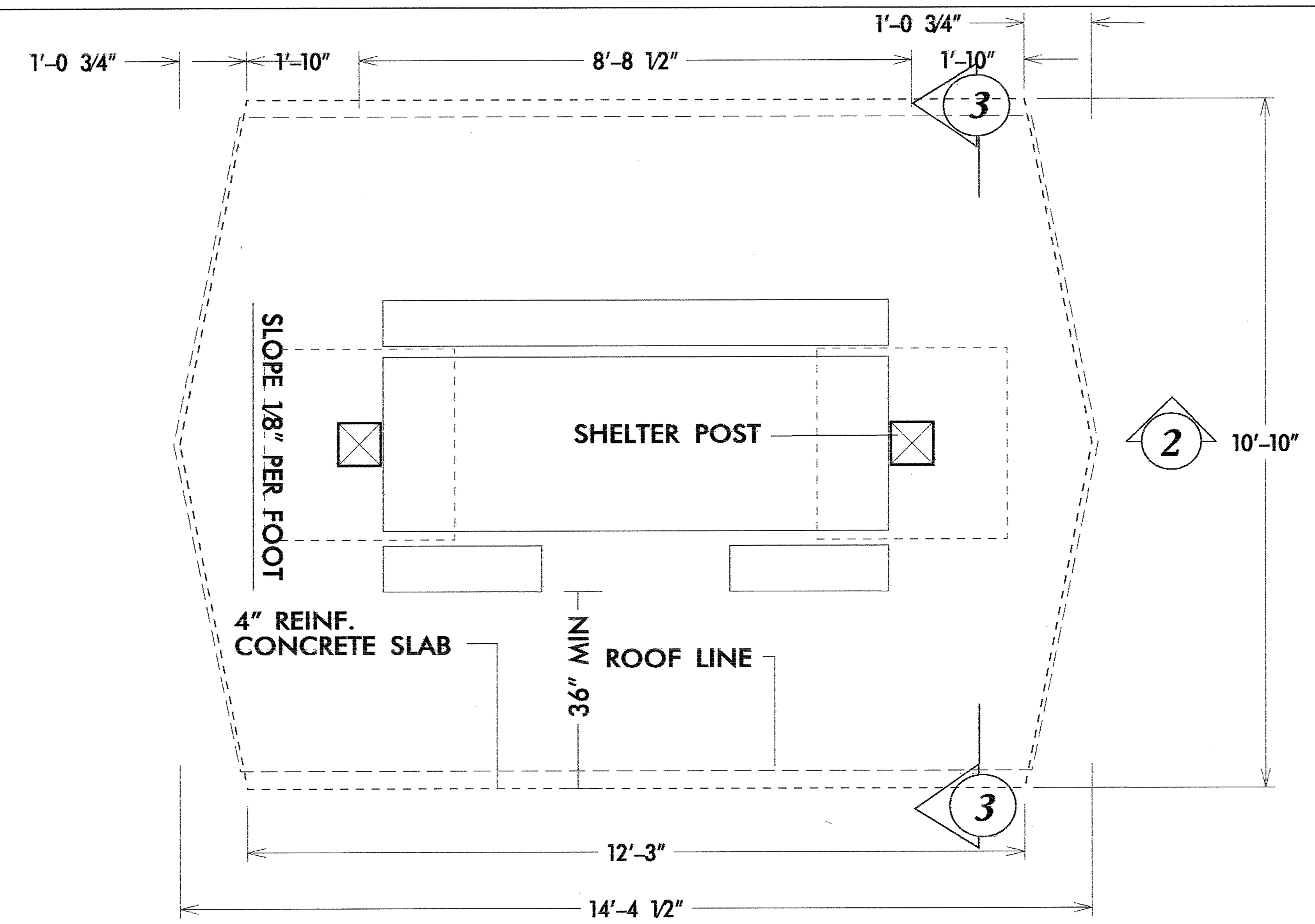
PREL. DESIGN DATE:	MAY 29, 2009
CHECKED BY & DATE:	
FINAL DESIGN DATE:	OCTOBER 27, 2009

PLANTING DETAILS

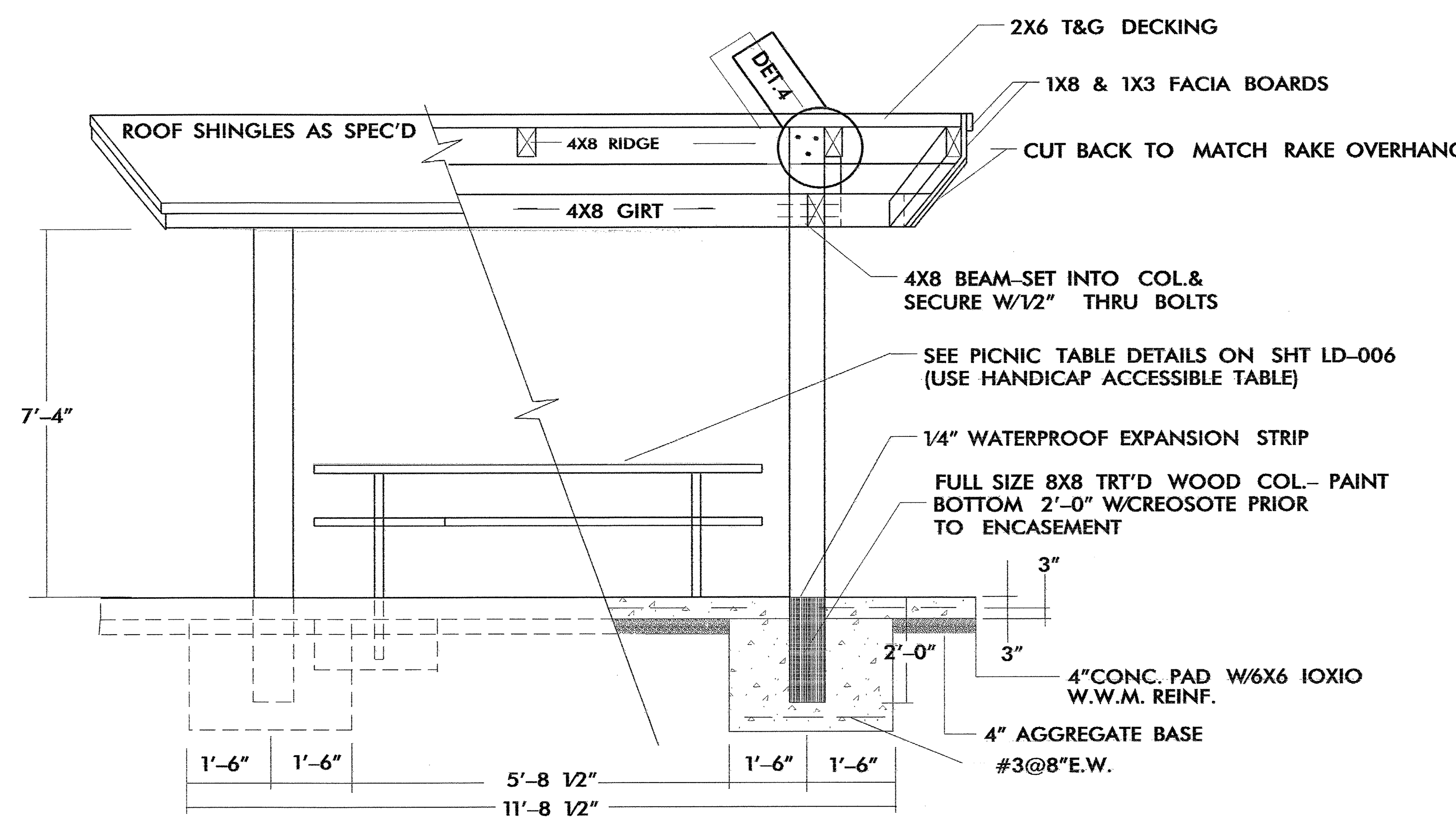
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. #	K-4907
WBS #	39893.3.ST1
FED I.D. #	STM-040-2(146)117
SHEET NO:	TOTAL SHEET NO:
LP-006	

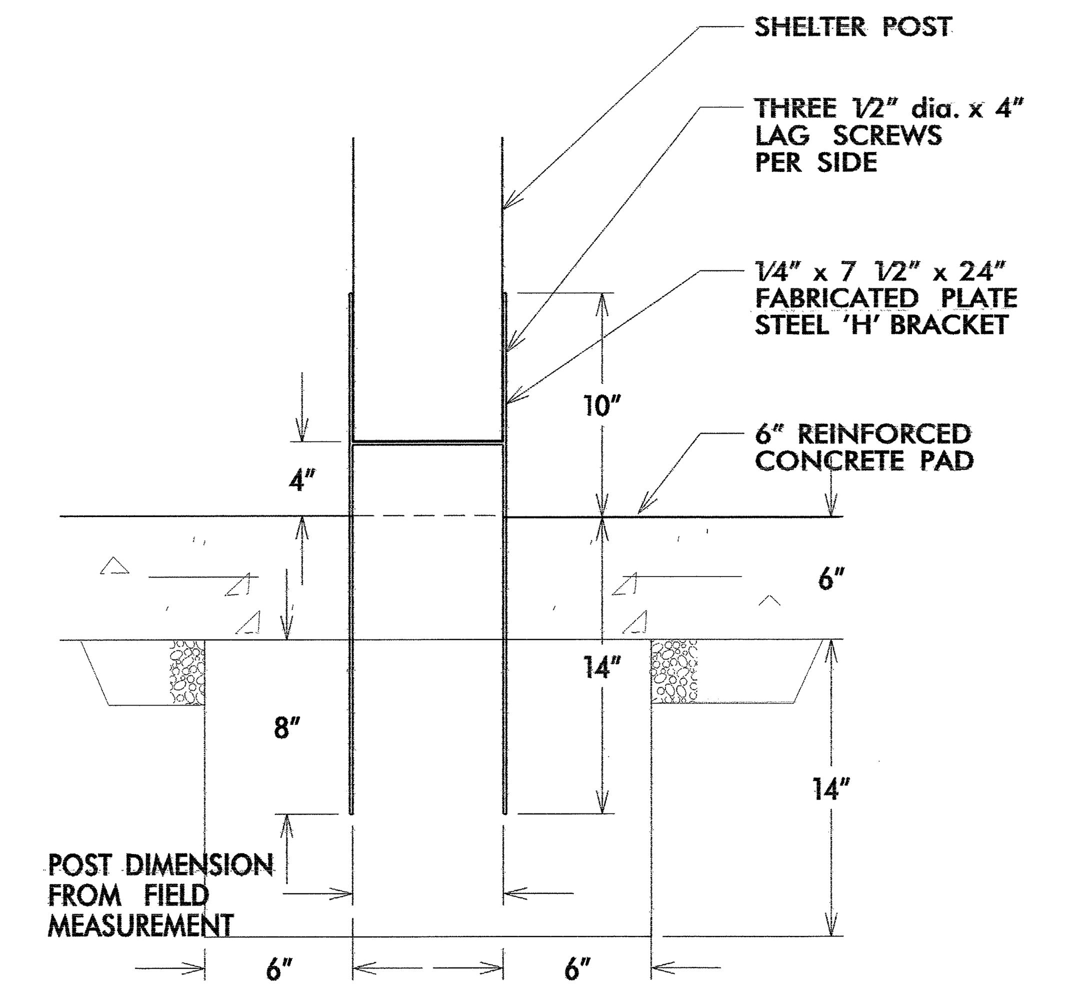
$$$$$$SYSTIME$$$$ $$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$ $$$$$USERNAME$$$$



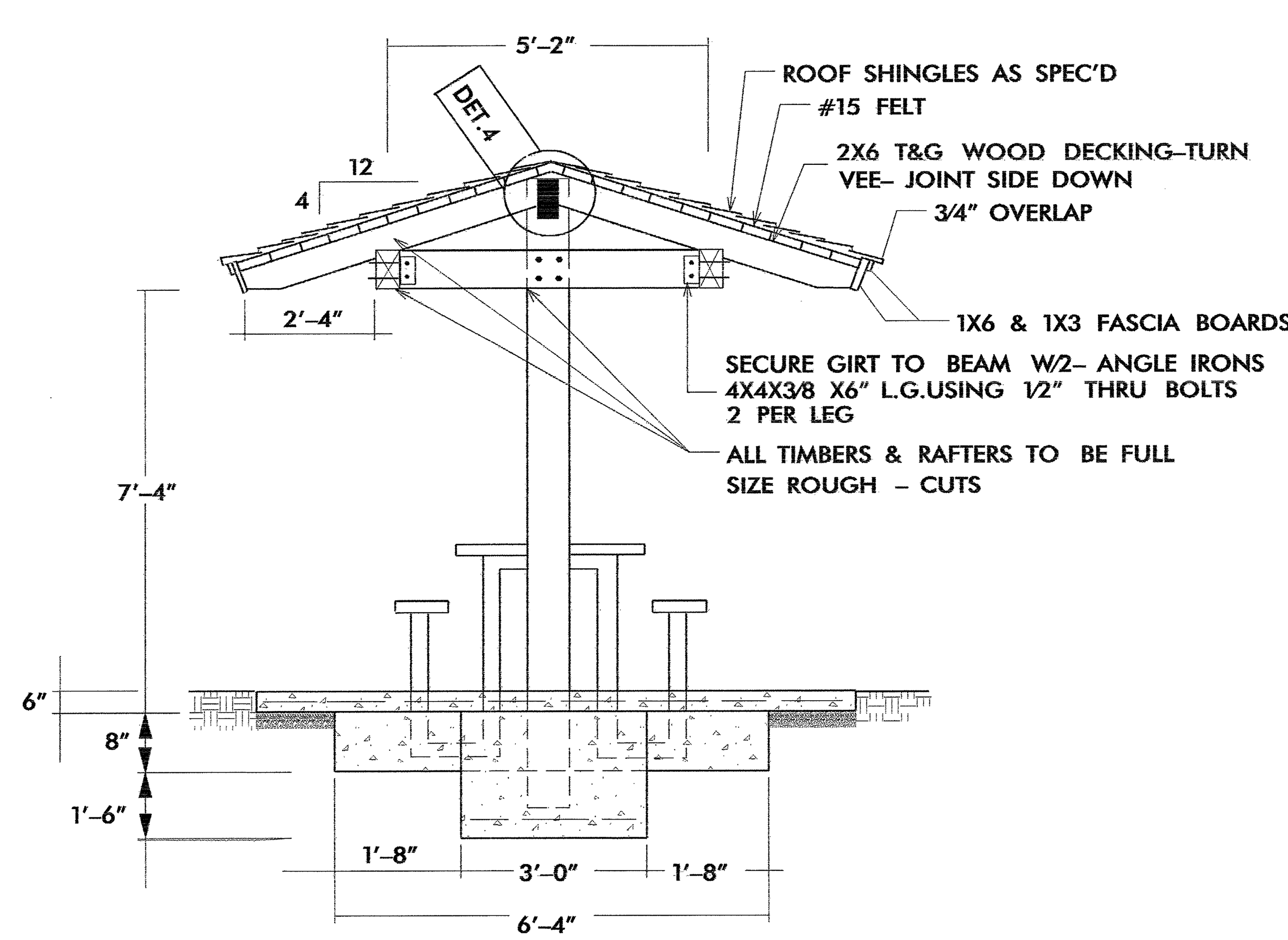
1 CONC PAD & ROOF PLAN
NTS



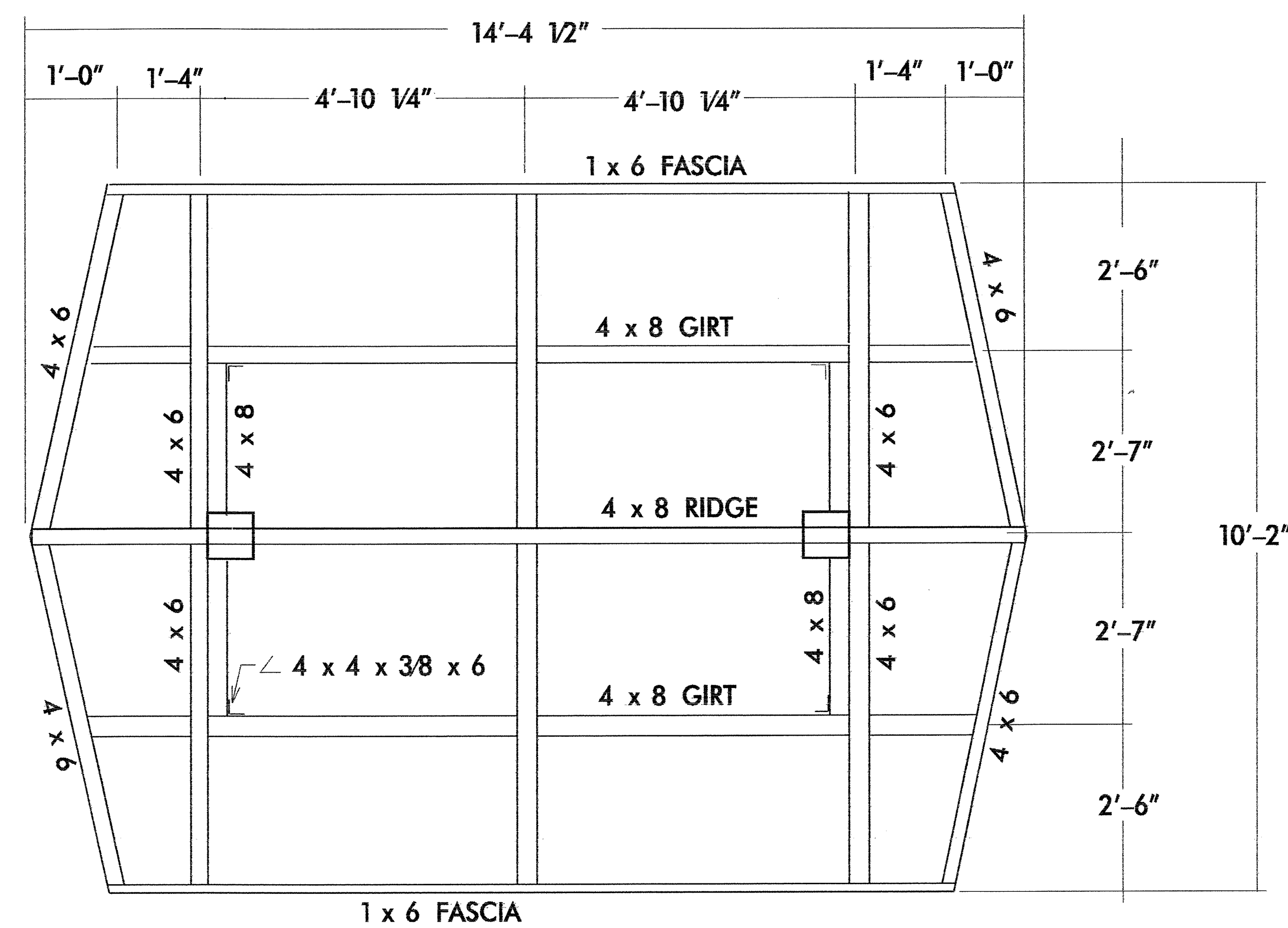
2 SECTION
1/2"=1'-0"



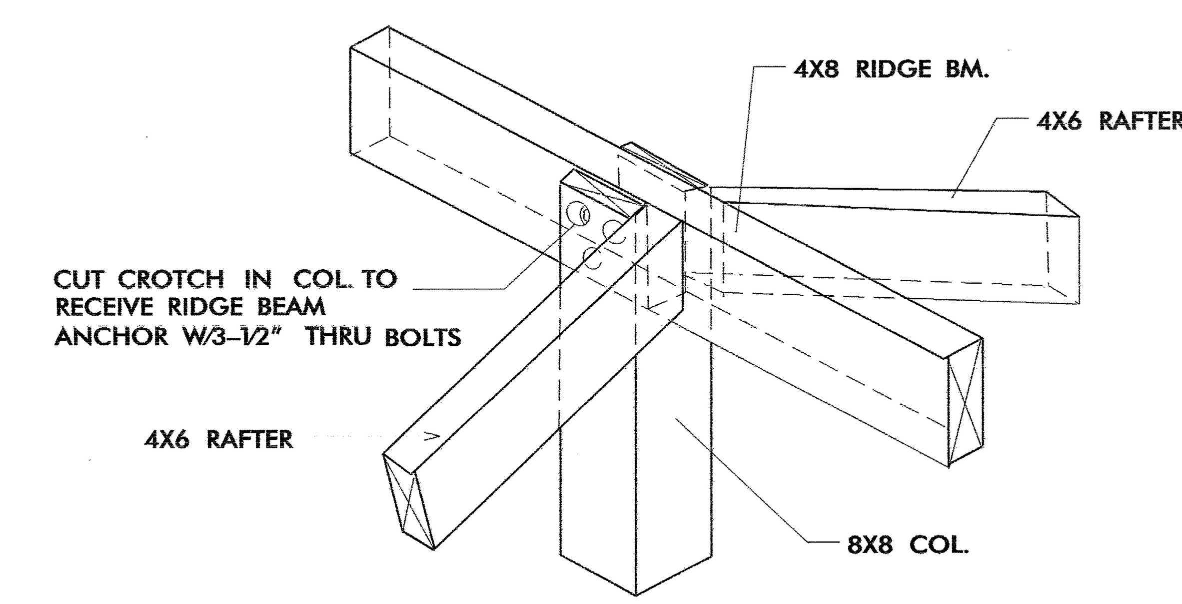
'H' BRACKET POST ANCHOR for
2 RELOCATED PICNIC SHELTER
N.T.S.



3 SECTION
1/2"=1'-0"



5 FRAMING PLAN
1/2"=1'-0"



4 JOINT DETAIL
1/2"=1'-0"

USE DETAIL FOR REFERENCE (TO RECONSTRUCT & RELOCATE EXISTING PICNIC SHELTER)

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY
REST AREA RENOVATION EBL
PROJECT #: 39893.1.1

REU ENGINEER:
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

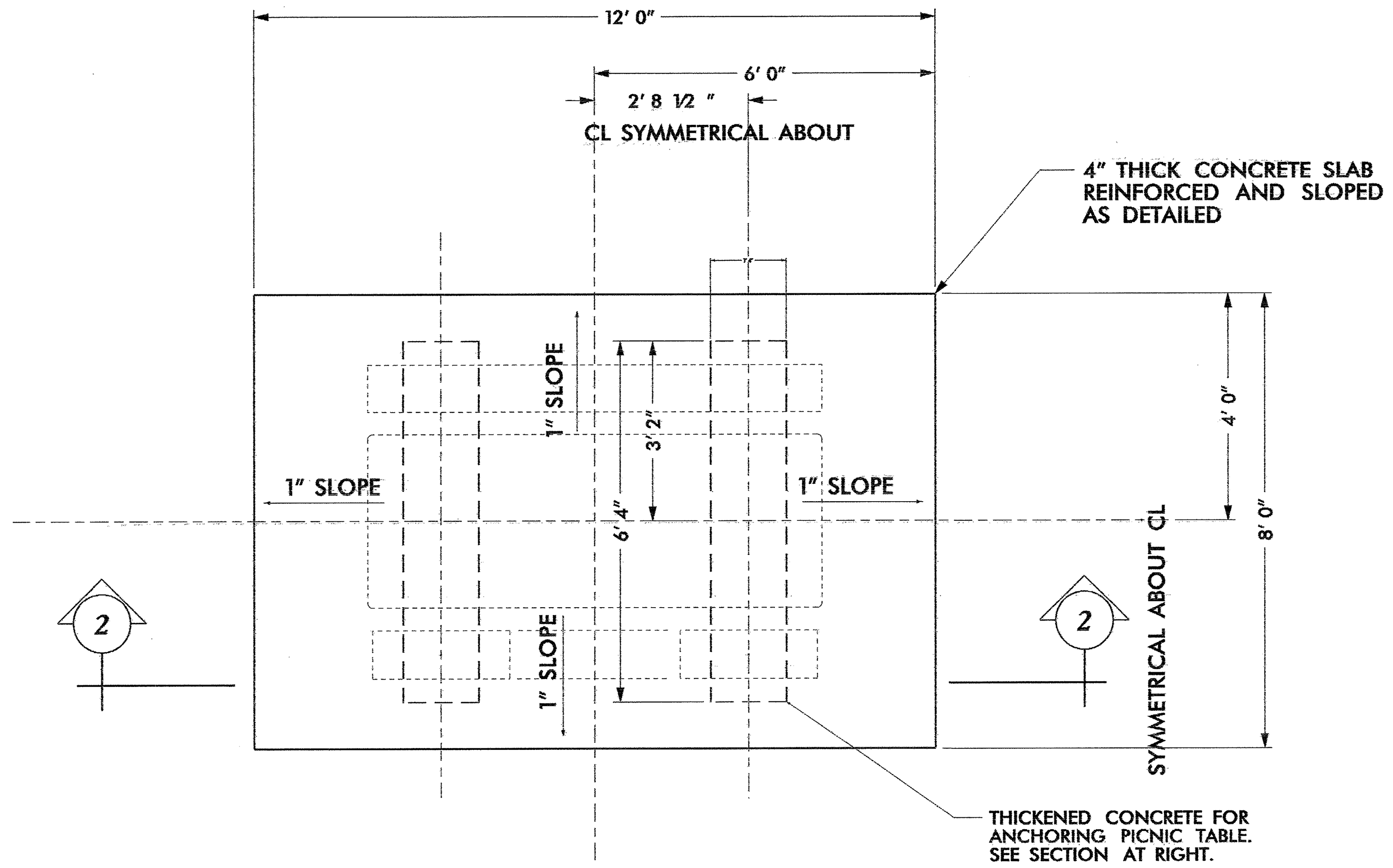
SHEET DESCRIPTION:

PREL DESIGN DATE:	MAY 29, 2009	DETAILS
CHECKED BY & DATE:		PICNIC SHELTER
FINAL DESIGN DATE:	OCTOBER 27, 2009	W/SINGLE TABLE

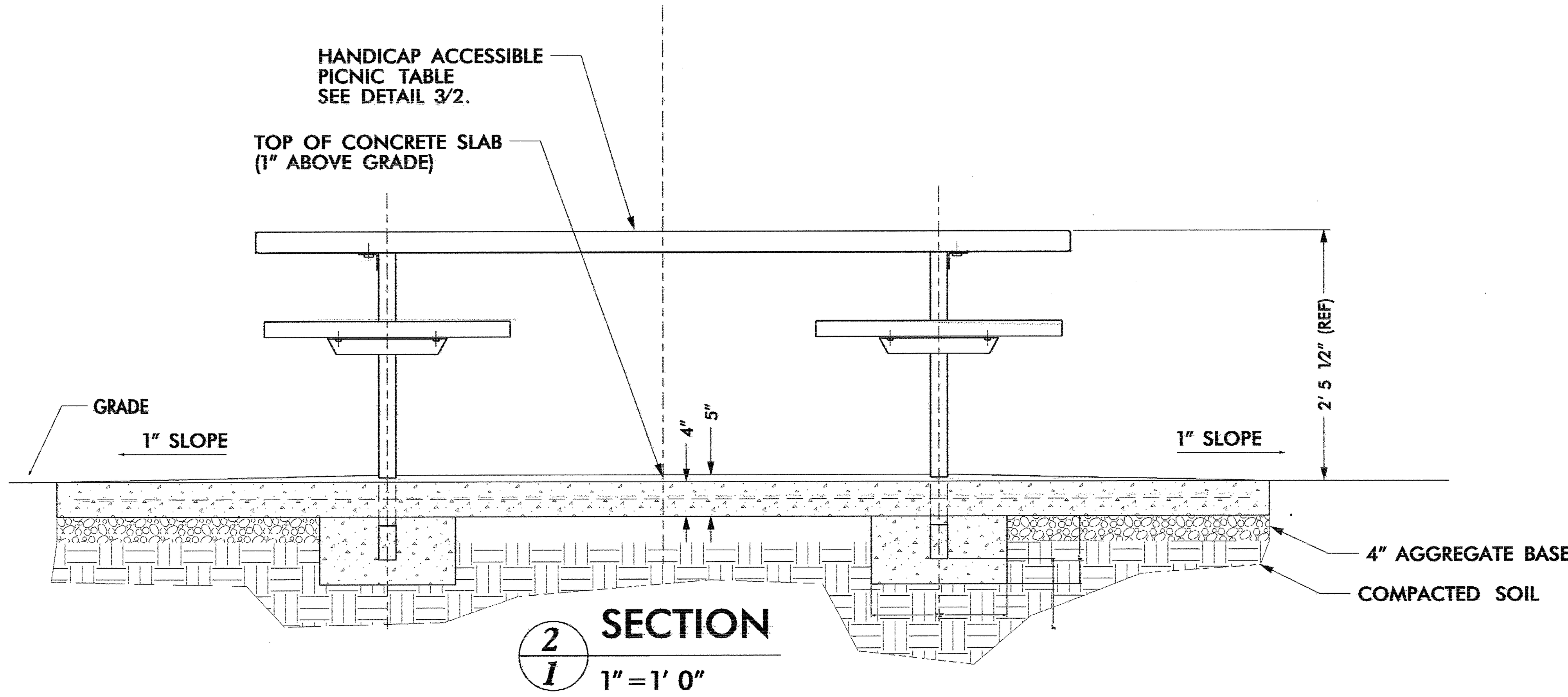
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LD-001
TOTAL SHEET NO:

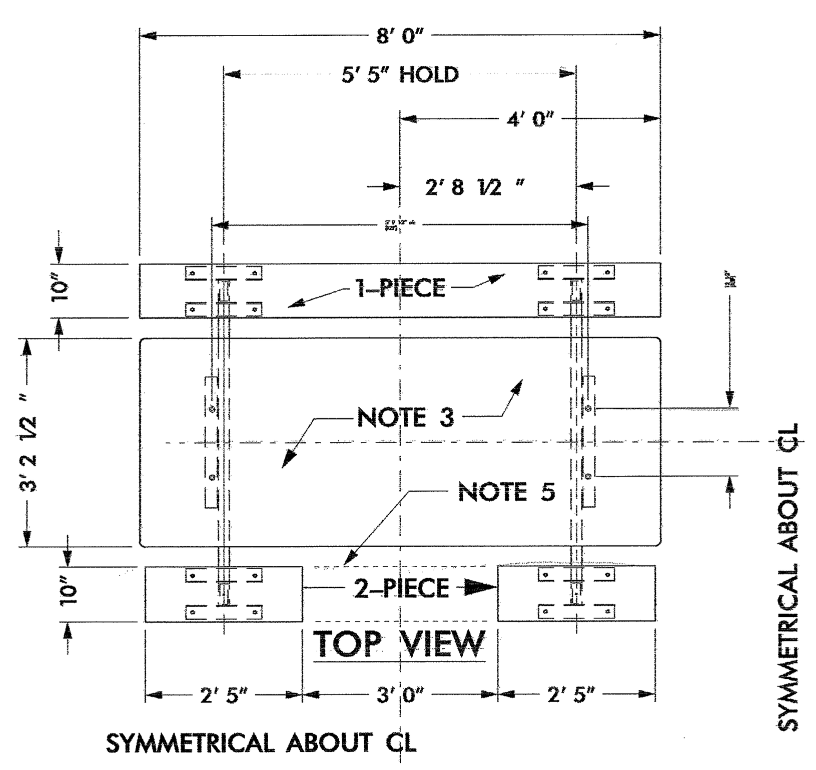
$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$



1 CONCRETE PAD PLAN
1/2" = 1' 0"



2/1 SECTION
1" = 1' 0"



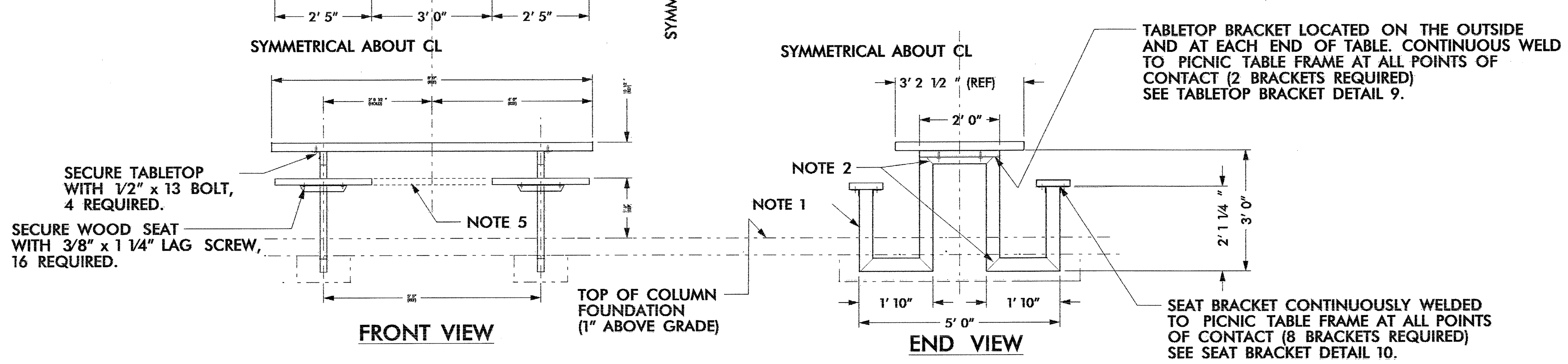
NOTE:
1) TUBULAR PICNIC TABLE FRAME SHALL BE 2" x 4" x 1/4" RECTANGULAR STEEL TUBING.

2) MITER ALL CORNERS, CONTINUOUS WELD ALL CONNECTIONS AND GRIND SMOOTH. (TYP ALL TUBULAR FRAMING AND STEEL ANGLES).

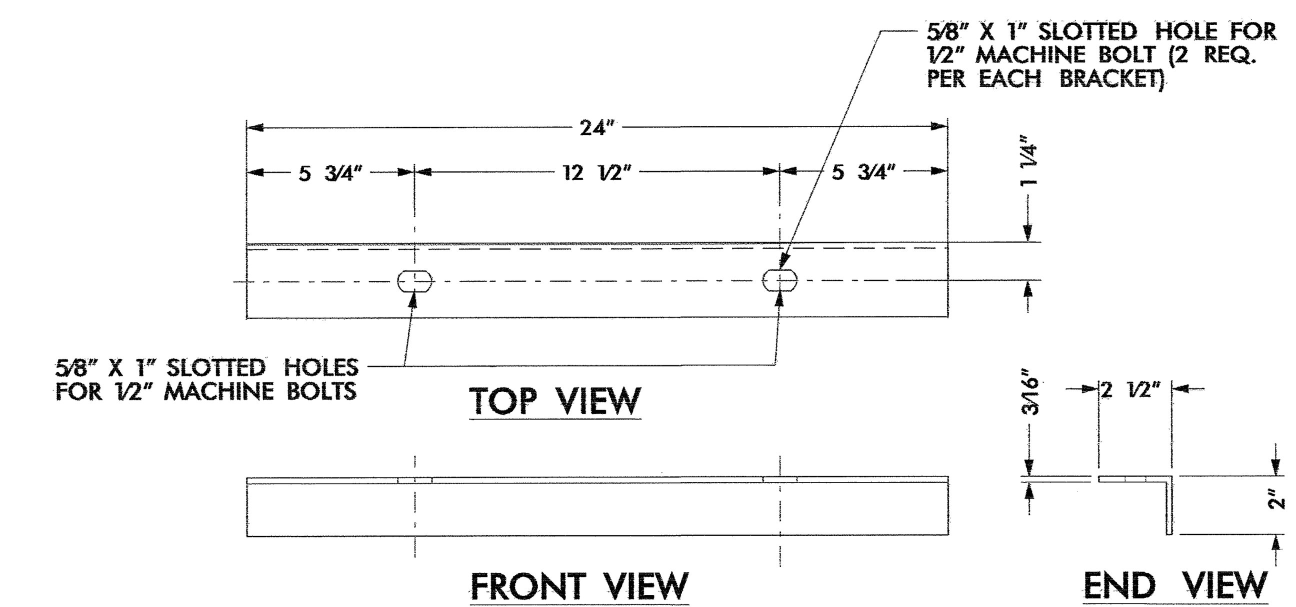
3) PICNIC TABLETOP SHALL BE PRECAST TERRAZO. SPECIFICATION SHALL BE THE SAME AS (OR EQUAL TO) SAMPLE #061217-1, AS SUPPLIED BY PRECAST TERRAZZO ENTERPRIZES, INC., 1107 N. NEW HOPE ROAD, RALEIGH, NC, 27610. TELE: 800.849.8849/919.231-6200, EXT 105

4) ELECTRICAL OUTLET TO BE INSTALLED AS DESIGNATED ON SITE UTILITY PLAN. OUTLET TO BE TWO GANG, DEEP, WEATHERPROOF OUTLET BOX WITH TWO GANG WEATHERPROOF COVER AND TWO GFI RECEPTACLES. ELECTRICAL CONDUIT TO BE 1" RIGID GALVANIZED THROUGH CONCRETE. GALVANIZED/PVC TRANSITION POINT TO BE UNDERGROUND. RUN UNDERGROUND CONDUIT TO POWER SOURCE PER SITE UTILITY PLAN.

5) NON-HANDICAP TABLE REQUIRES ONE (1) PIECE SEAT ON BOTH SIDES OF TABLE. HANDICAP TABLE REQUIRES TWO (2) PIECE SEAT ON ONE SIDE OF TABLE. ORIENT 2-PIECE SEAT ADJACENT TO 4" CONCRETE ACCESS PAD SHOWN ON SITE PLAN.

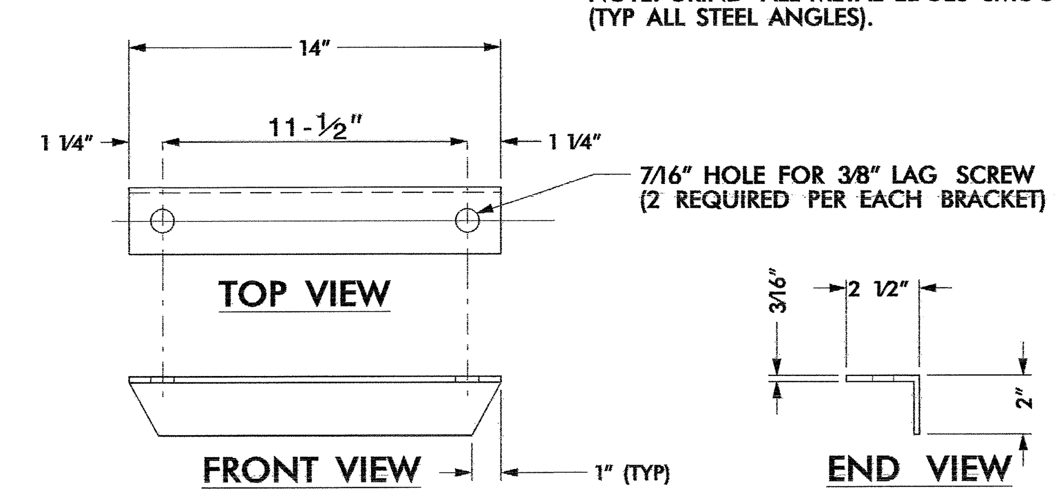


8 PICNIC TABLE – ORTHO GRAPHIC VIEWS
1/2" = 1' 0"



9 TABLETOP BRACKET - 2 REQ.
NO SCALE

NOTE: GRIND ALL METAL EDGES SMOOTH (TYP ALL STEEL ANGLES).



10 SEAT BRACKET - 8 REQ.
NO SCALE

0 5 10 15 20

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LANDSCAPE DESIGN & DEVELOPMENT
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HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY
REST AREA RENOVATION EBL
PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

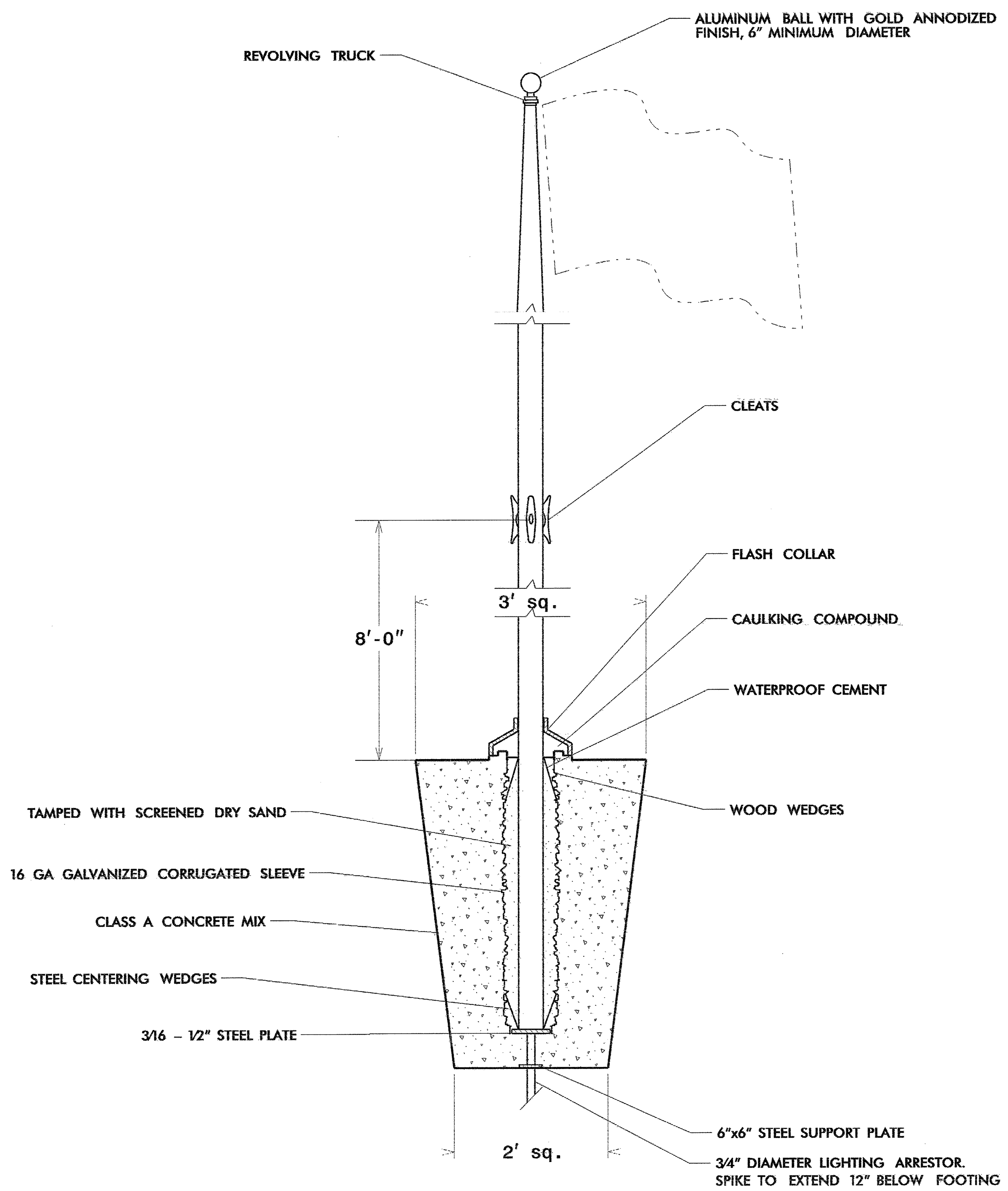
PREL. DESIGN DATE:	MAY 29, 2009
CHECKED BY & DATE:	
FINAL DESIGN DATE:	OCTOBER 27, 2009

DETAILS
PICNIC TABLE

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LD-002
TOTAL SHEET NO:

$$$$$$SYSTIME$$$$$$ $$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$ $$$$USERNAME$$$$



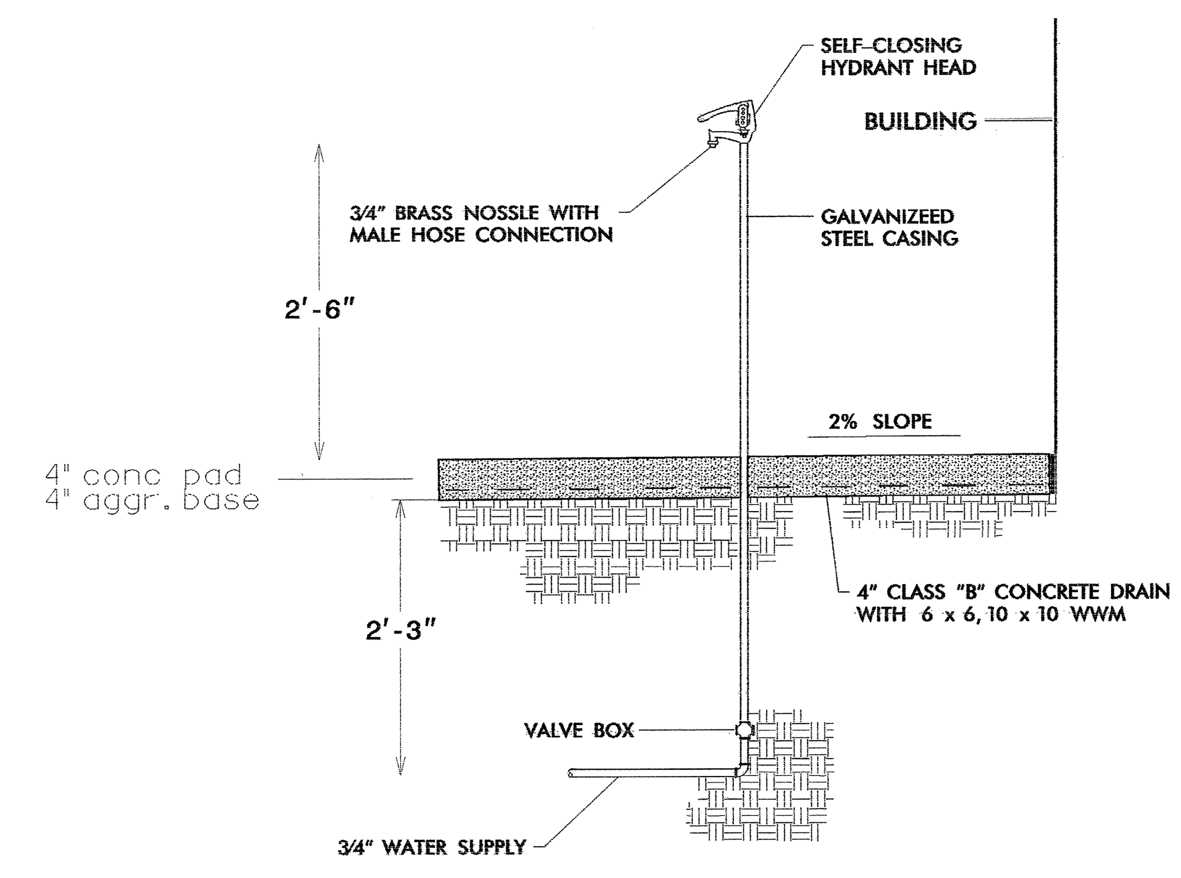
FLAG POLE ELEVATION

SCALE: NTS

FLAGPOLE

FP
LD6

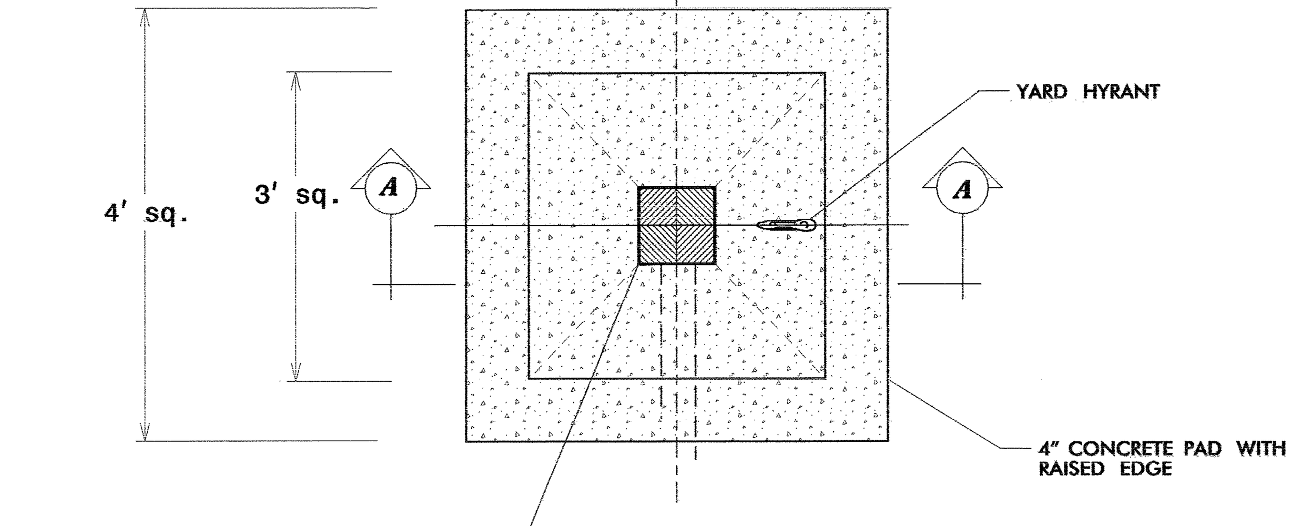
NTS



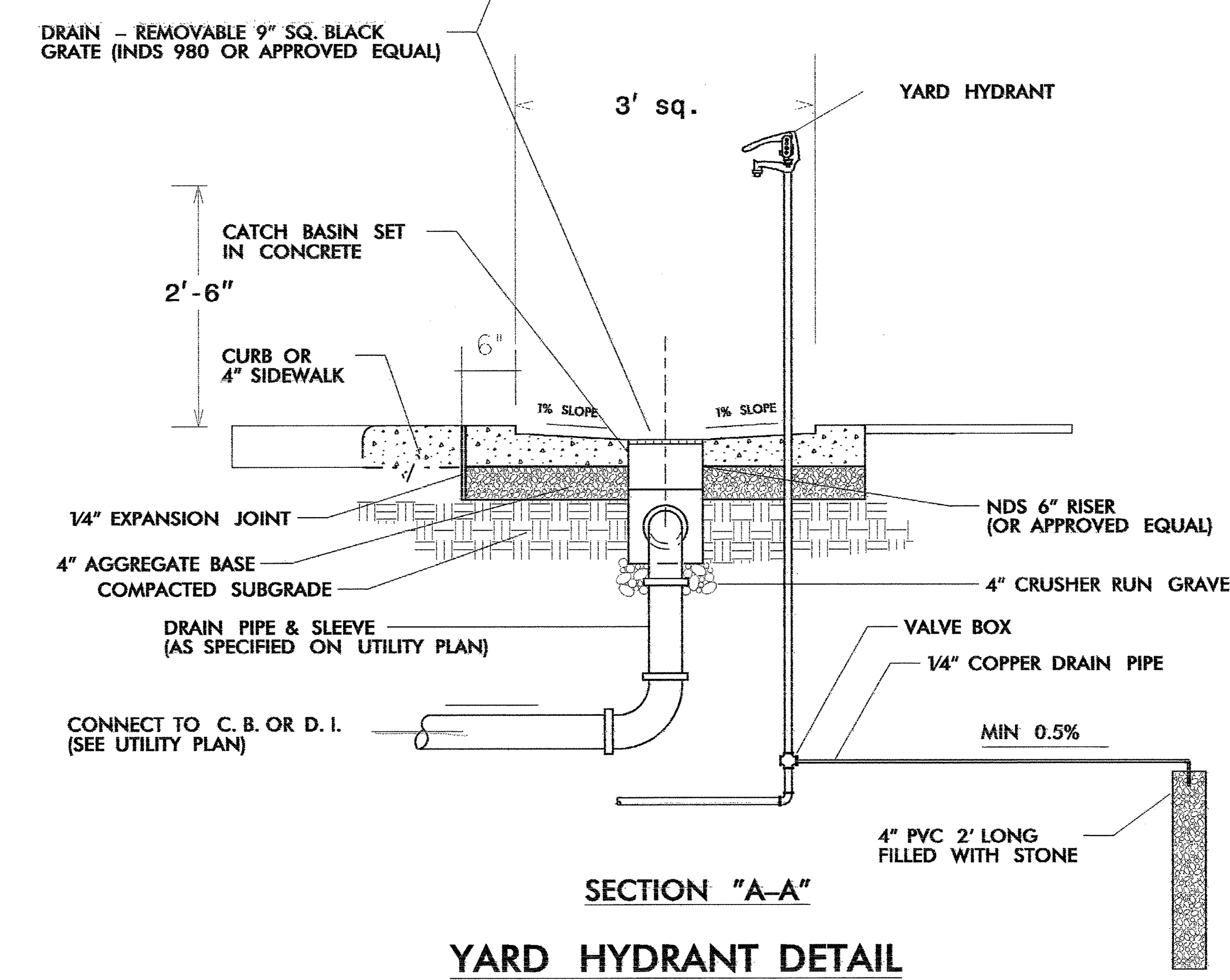
SECTION VIEW

YARD HYDRANT DETAIL

SCALE: NTS



PLAN VIEW



SECTION "A-A"

YARD HYDRANT DETAIL

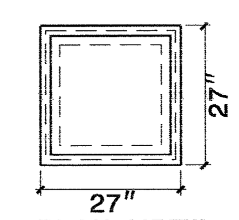
SCALE: NTS

YARD HYDRANT

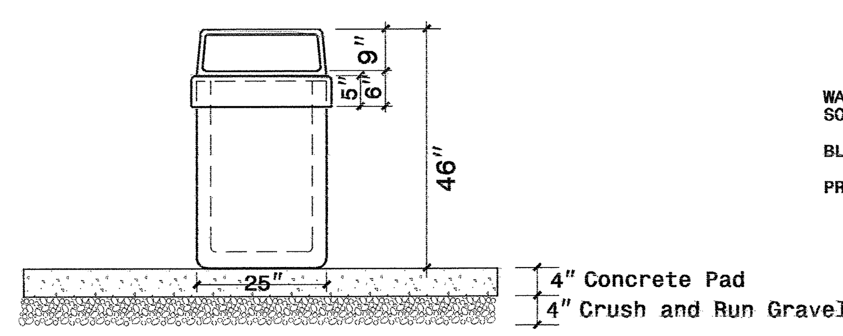
YH
LD6

NTS

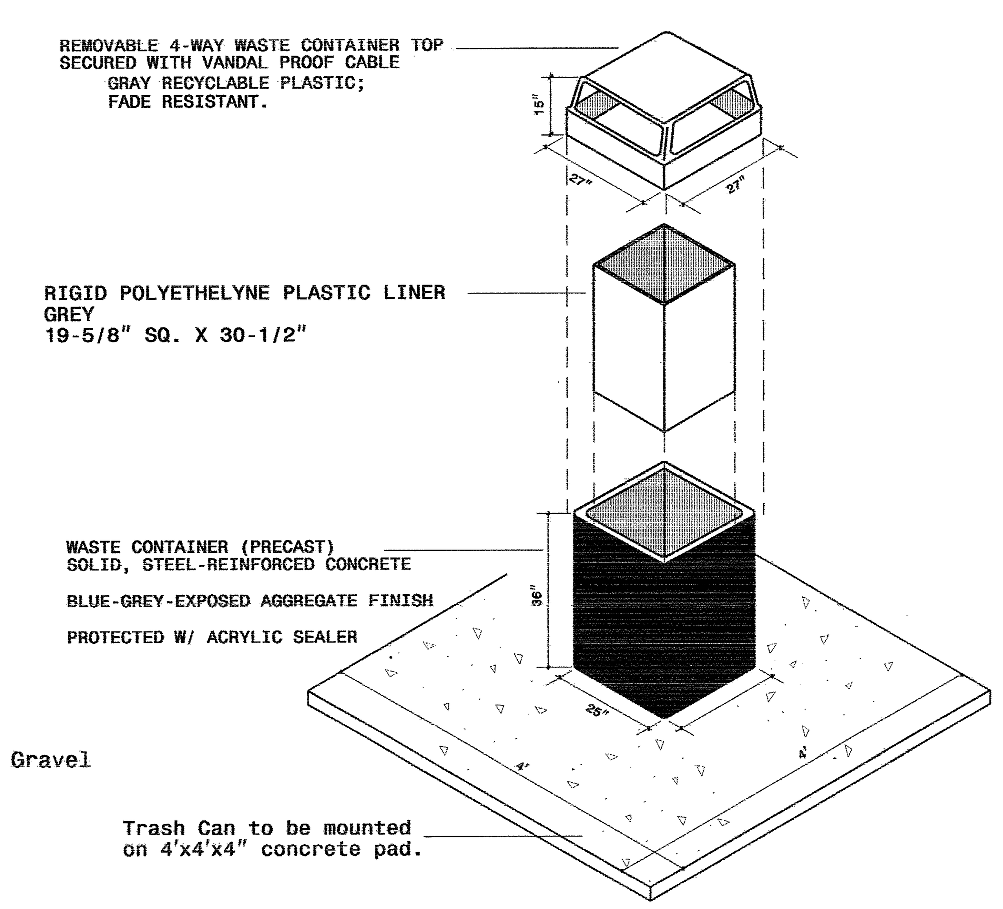
PRE-CAST EXPOSED AGGREGATE – WASTE CONTAINER



PLAN VIEW



ELEVATION



EXPOSED AGGREGATE WASTE CONTAINER

WC
LD6

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY
REST AREA RENOVATION EBL

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

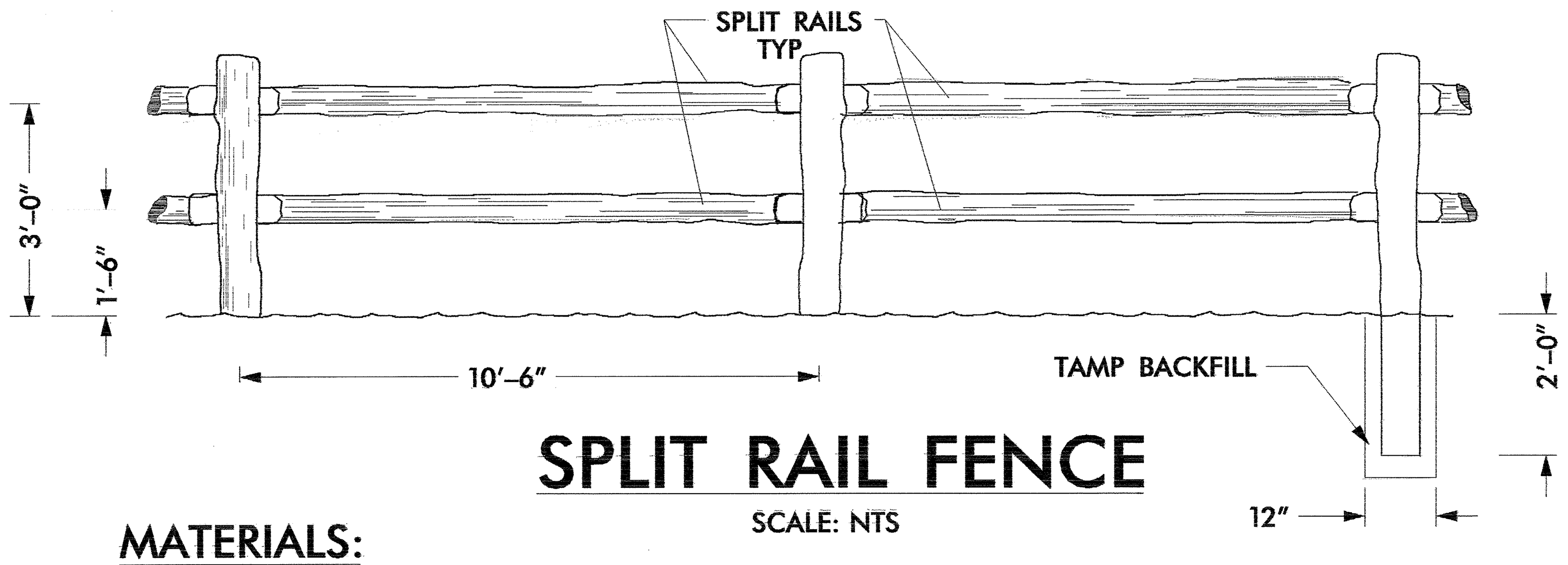
PREL. DESIGN DATE:	MAY 29, 2009
CHECKED BY & DATE:	
FINAL DESIGN DATE:	OCTOBER 27, 2009

DETAILS
FLAGPOLE, YARD HYDRANT
WASTE CONTAINER

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LD-003
TOTAL SHEET NO:

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$$



SPLIT RAIL FENCE

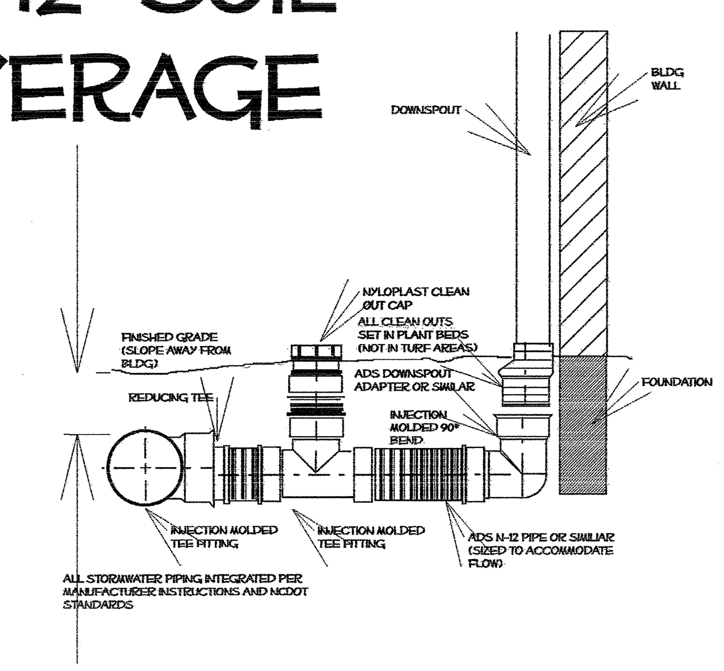
SCALE: NTS

MATERIALS:

1) POSTS – 6"x6" END, 3"x6" LINE LOCUST.

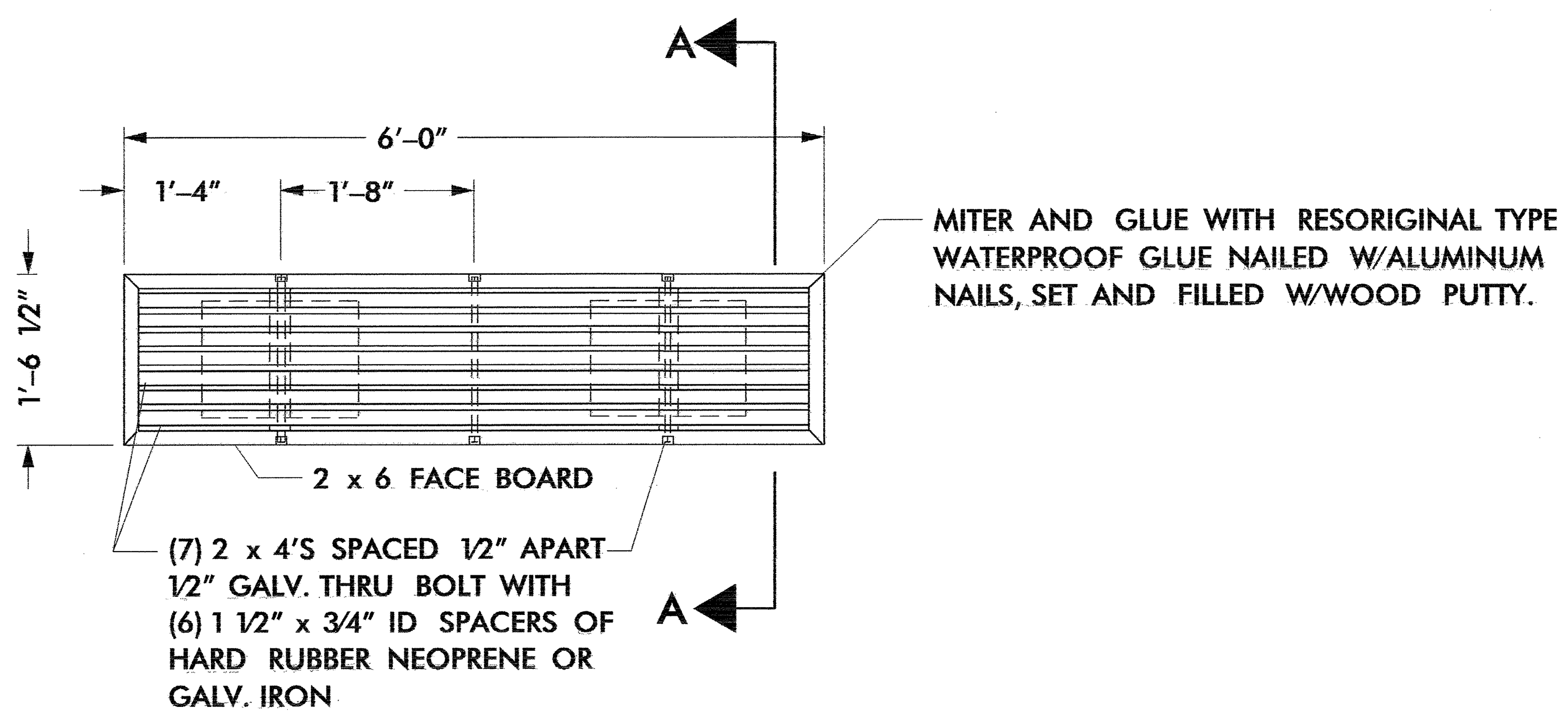
2) RAILS – HEMLOCK

MIN. 12" SOIL COVERAGE



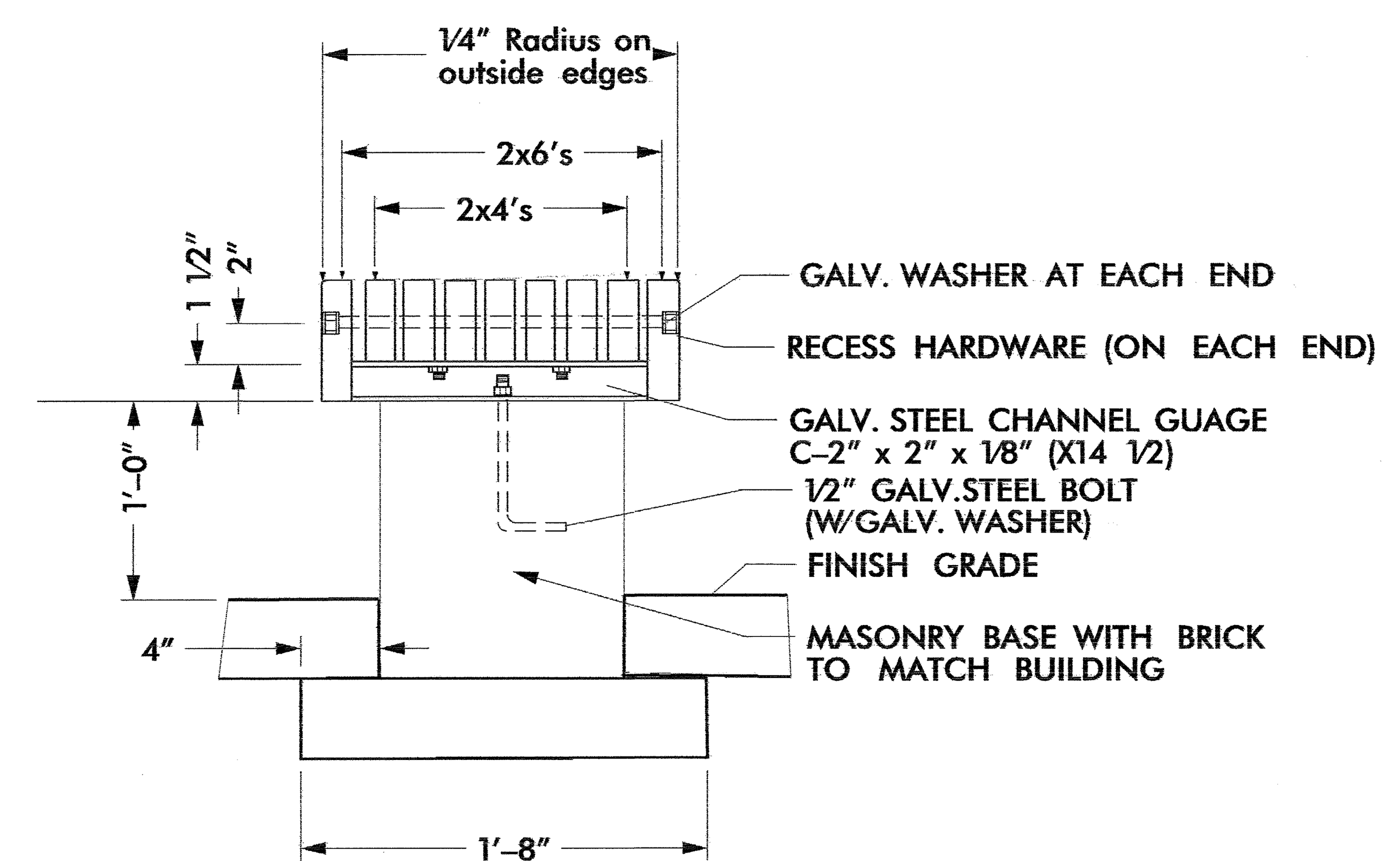
ROOF LEADER CONNECTION

SCALE: NTS



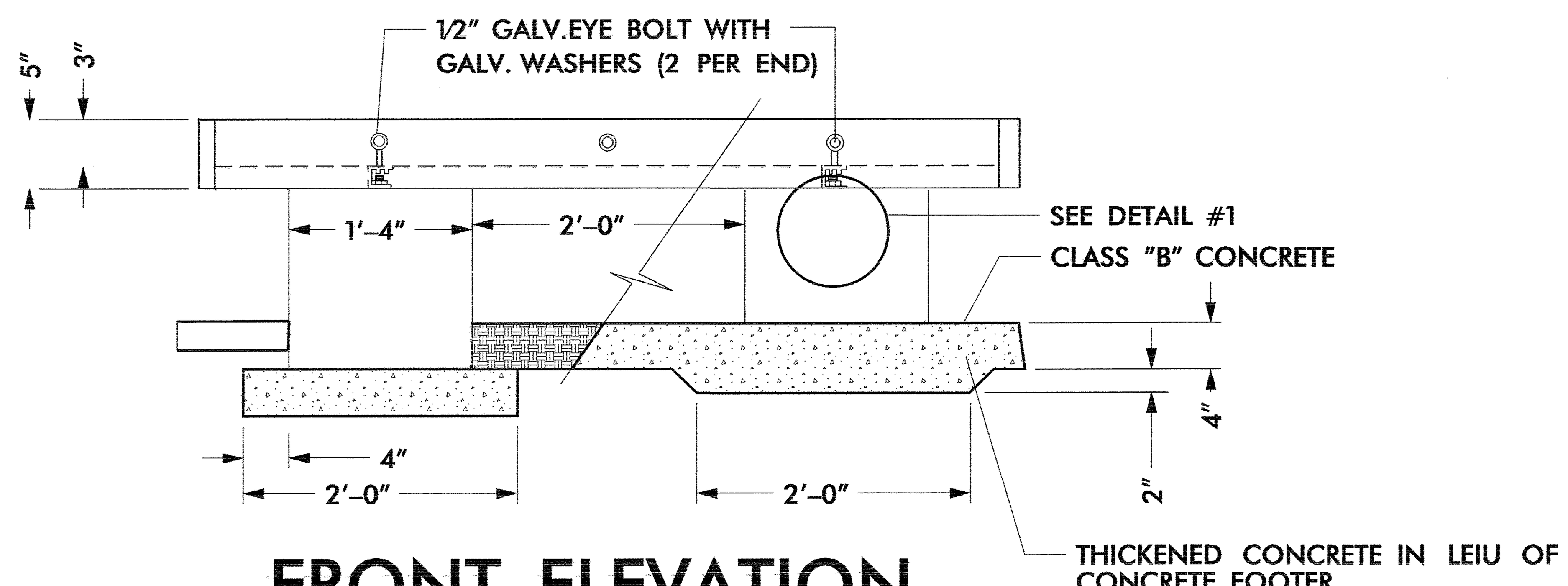
PLAN ELEVATION

SCALE: NTS



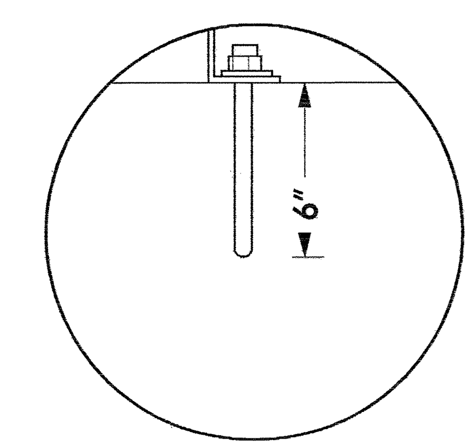
SECTION A-A

SCALE: NTS



FRONT ELEVATION

SCALE: NTS



DETAIL #1

SCALE: NTS

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY
REST AREA RENOVATION EBL
PROJECT #: 39893.1.1

REU ENGINEER:
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

PREL. DESIGN DATE: MAY 29, 2009
CHECKED BY & DATE:
FINAL DESIGN DATE: OCTOBER 27, 2009

DETAILS
2 RAIL SPLIT RAIL FENCE
6' BENCH, ROOF LEADER

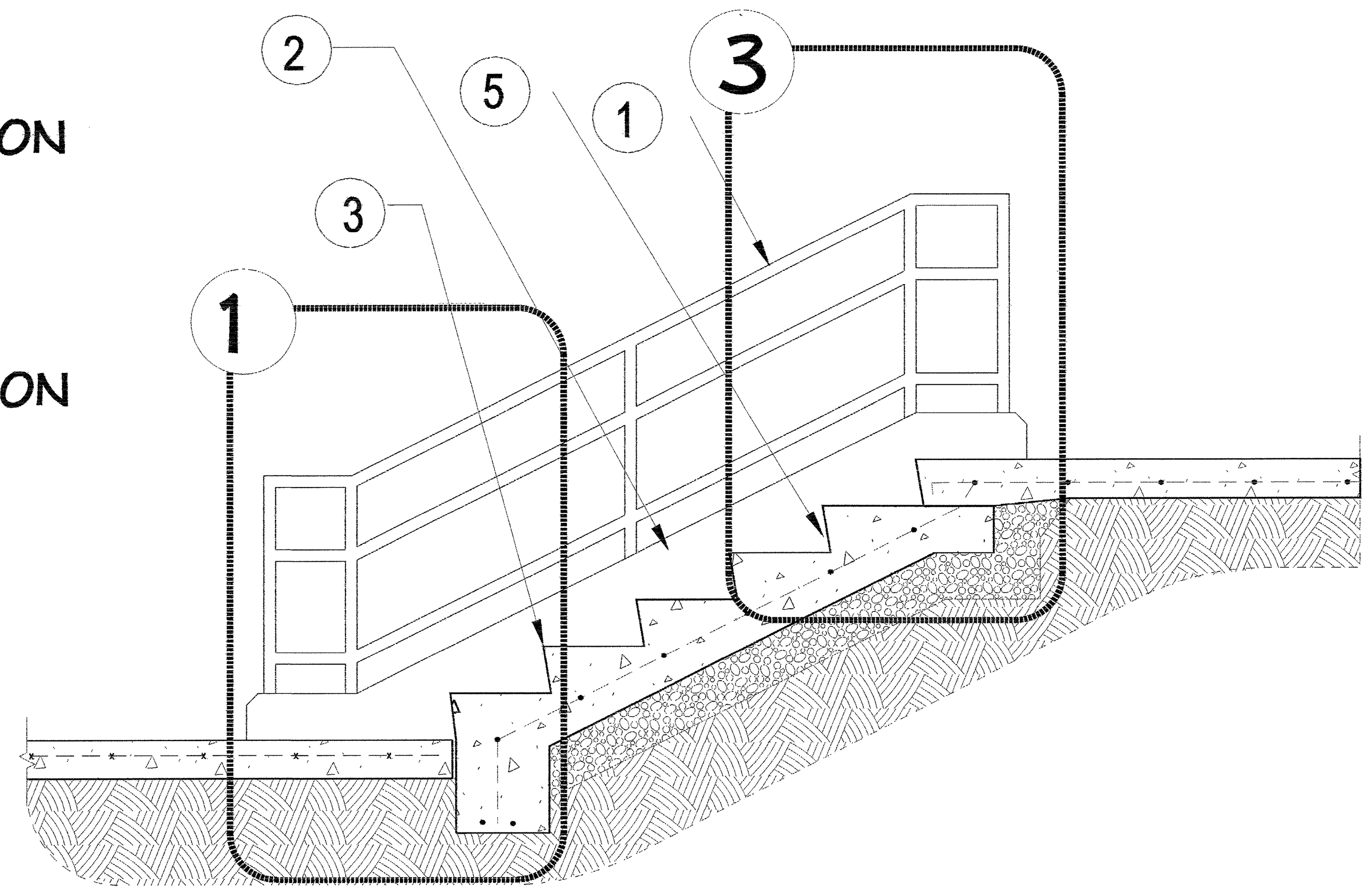
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO: LD-004
TOTAL SHEET NO:

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$$

UPPER LEVEL ELE. VARIES BY LOCATION
SEE PLANS

LOWER LEVEL ELE. VARIES BY LOCATION
SEE PLANS

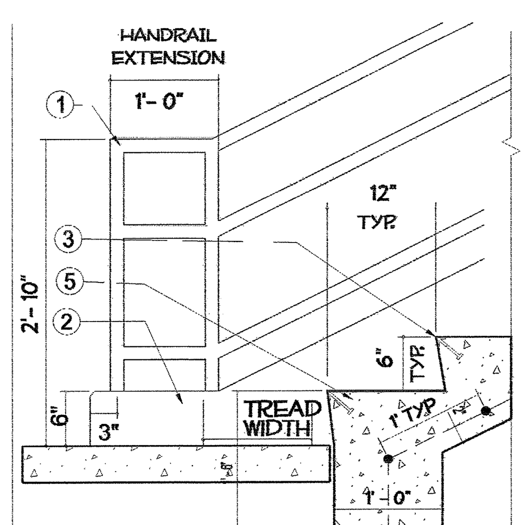


1. HANDRAIL- 1 1/2" Ø METAL PIPE, TYP.
2. CONCRETE CURB STRINGER
3. GALVANIZED METAL NOSING, TYP.
   -EMBED IN CONCRETE
4. GUARDRAIL PIPE SLEEVE - 2 1/4" Ø
   METAL PIPE, TYP.
5. 6'-0" WIDE POURED IN PLACE CONCRETE STAIR WITH REINFORCING AS SHOWN. REINFORCING SHALL BE 1/2" Ø STEEL REBAR 12" O.C. IN BOTH DIRECTIONS. REINFORCING SHALL EXTEND INTO STRINGERS.

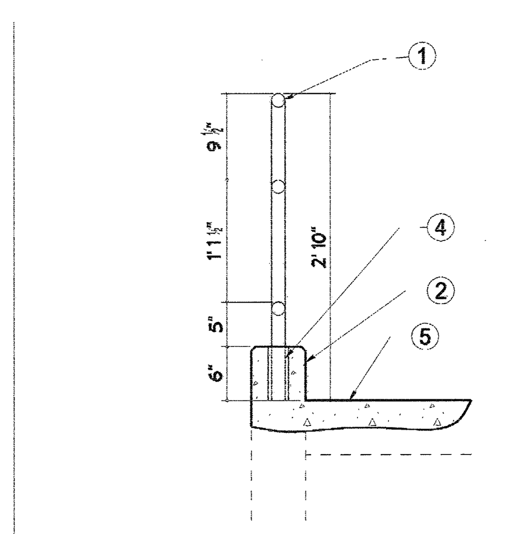
   REINFORCING, NOSING AND OTHER MATERIALS INCIDENTAL TO STEP CONSTRUCTION, EXCEPT HANDRAIL,SHALL BE INCLUDED IN THE PER CUBIC YARD PAYMENT AMOUNT.

HANDRAIL ASSEMBLY TO BE FINISHED WITH KYNAR 500 TO MATCH CURTAINWALL SYSTEM.

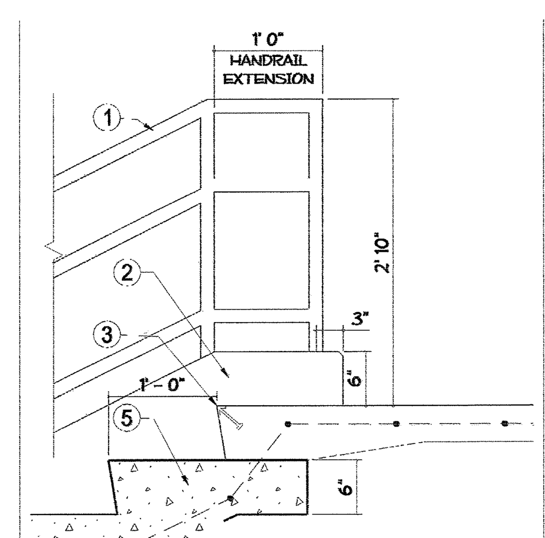
SEE PLANS FOR LOCATION.



STAIR DETAIL 1



STAIR DETAIL 2



STAIR DETAIL 3

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-733-2920 FAX: 919-733-9810
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

I- 40 CATAWBA COUNTY
REST AREA RENOVATION

PROJECT #: 39893.1.1

REU ENGINEER: NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 606 DANIEL L. WILSON 11/16/09

SHEET DESCRIPTION:

PREL. DESIGN DATE :	MAY 29, 2009	DETAILS
CHECKED BY & DATE :		CONCRETE STAIRS
FINAL DESIGN DATE :	OCTOBER 27, 2009	

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

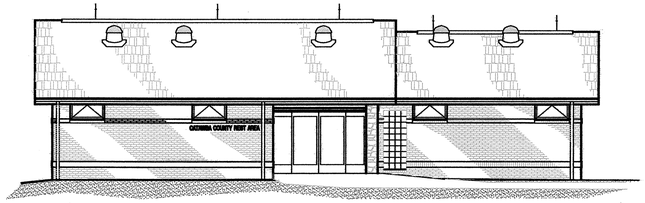
T.I.P. # K-4907
WBS # 39893.3.ST1
FED I.D. # STM-040-2(146)117
SHEET NO : LD-005
TOTAL SHEET NO :

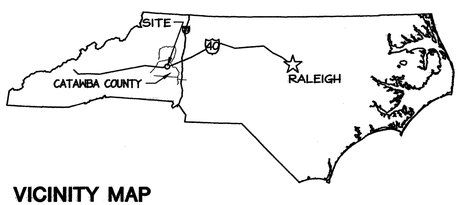
$$$$$SYSTIME$$$$$ $$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$ $$$$$USERNAME$$$$$

I-40 REST AREA RENOVATION

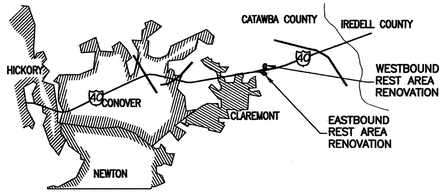
NEW REST AREA BLDG. & VENDING BLDG. RENOVATION

CATAWBA COUNTY, NORTH CAROLINA





VICINITY MAP



LOCATION MAP

INDEX OF DRAWINGS

T1 DESIGN DATA & ABBREVIATION
T2 DESIGN DATA FOR EXISTING BUILDINGS

PHASE 1
A1 FLOOR PLAN REST AREA
A2 EXT. ELEVATIONS & ROOF PLAN
A3 BUILDING SECTIONS
A4 INTERIOR ELEVATIONS & DETAILS
A5 FINISH, WINDOWS AND DOORS SCHEDULES
A6 WALL SECTIONS & ELEVATIONS
A7 REFLECTED CEILING PLAN & DETAILS

S1 FOUNDATION PLAN & DETAILS
S2 FRAMING PLAN & DETAILS

P1 PLUMBING WASTE PLAN - EBL
P1A PLUMBING WASTE PLAN - WBL
P2 PLUMBING WATER PLAN - EBL & WBL
P3 PLUMBING WASTE RISER & DETAILS - EBL
P3A PLUMBING WASTE RISER & DETAILS - WBL
P4 PLUMBING DOMESTIC WATER RISER & DETAILS EBL & WBL

M1 MECHANICAL PLAN & NOTES
M2 MECHANICAL DETAILS & SCHEDULES

E1 ELECTRICAL LIGHTING PLAN & DETAILS
E2 ELECTRICAL POWER PLAN & PANELS
E3 ELECTRICAL RISERS & PANELS

PHASE 2
VA1 FLOOR PLAN/ SCHEDULES
VA2 ELEVATIONS
VA3 CEILING PLAN
VA4 DEMO PLAN

VP1 PLUMBING WASTE PLAN & RISER
VP2 PLUMBING WATER PLAN & RISER

VM1 MECAHNICAL PLAN

VE1 ELECTRICAL PLAN

SYMBOLS

- SILT FENCE
- ELEVATION MARK
- DRAINAGE / SLOPE ARROW
- 80 EXISTING CONTOURS
- EXISTING ELEVATION
- 80 NEW CONTOURS
- NEW ELEVATION
- EXISTING TREE
- FIRE EXTINGUISHER
- RIGID INSULATION
- BATT INSULATION / BLOWN
- DRYWALL OR PLASTER
- GRAVEL
- UNDISTURBED EARTH
- COMPACTED FILL
- 1 REVISION NUMBER
- E2 / RA9 ELEVATION NUMBER / DRAWING SHEET NUMBER
- E1 / RA9 DRAWING NUMBER / DRAWING SHEET REFERENCE NUMBER
- E2 / RA1 BUILDING OR WALL SECTION NO. / DRAWING SHEET NUMBER
- CMU
- CONCRETE
- STEEL
- ROUGH CARPENTRY
- FINISH CARPENTRY

ABBREVIATIONS & SYMBOLS

<	ANGLE	EA.	EACH	M.O.	MASONRY OPENING	STL.	STEEL
AL.	ALUMINUM	EW	EYE WASH	MAT.	MATERIAL	STG.	STORAGE
AB.	ANCHOR BOLT	ELEC.	ELECTRICAL	MAX.	MAXIMUM	S.A.C.	SUSPENDED ACOUSTICAL CEILING
APPROX.	APPROXIMATE	ELEV.	ELEVATION	MIN.	MINIMUM	T&G	TONGUE AND GROOVE
ARCH.	ARCHITECTURAL	EXIST.	EXISTING	MTD.	MOUNTED	T.O.F.	TOP OF FOOTING
@	AT	EWC	ELECTRIC WATER COOLER	MLDG.	MOULDING	T.O.J.	TOP OF JOIST
AVG.	AVERAGE	EJ	EXPANSION JOINT	N.T.S.	NOT TO SCALE	T.O.S.	TOP OF STEEL
BB	BACK TO BACK	EBC	EXTENDED BOTTOM CHORD	NO.	NUMBER	T.O.W.	TOP OF WALL
BSMT.	BASEMENT	EXT.	EXTERIOR	O.C.	ON CENTER	T.	TREAD
BRG.	BEARING	FFE	FINISH FLOOR ELEVATION	OPNG.	OPENING	TYP.	TYPICAL
BM.	BENCH MARK	FINFL.	FINISH FLOOR	PNL.	PANEL	UNFIN.	UNFINISHED
BLKG.	BLOCKING	F.E.	FIRE EXTINGUISHER	PLASLAM	PLASTIC LAMINATE	U.O.N.	UNLESS OTHERWISE NOTED
BD.	BOARD	F.D.	FLOOR DRAIN	℄	PLATE	VERT.	VERTICAL
BLDG.	BUILDING	FTG.	FOOTING	PLMB.	PLUMBING	W.W.M.	WELDED WIRE MESH
CH	CEILING HEIGHT	FRSHB	FIRE RATED GYPSUM WALLBOARD	PLYWD.	PLYWOOD	W/	WITH
℄	CENTER LINE	GALV.	GALVANIZED	LB.(#)	POUND	WD.	WOOD
CC	CENTER TO CENTER	GA.	GAUGE	PREFAB.	PREFABRICATED	102	ROOM/SPACE NUMBER
C.I.	CAST IRON	GL.	GLASS	P.S.I.	POUNDS PER SQUARE INCH		
COL.	COLUMN	GP.	GLAZED PAVER TILE	REQ'D	REQUIRED	(D)	WINDOW TYPE
CONC.	CONCRETE	GWB	GYPSUM SHEATHING	R.	RISER	(2)	DOOR TYPE
CMU	CONCRETE MASONRY UNIT	GYP.	GYPSUM	SAN.	SANITARY		CENTER LINE
CONT.	CONTINUOUS	HM	HOLLOW METAL	SEC.	SECTION		HIDDEN LINE
C.J	CEILING JOIST	HOR.	HORIZONTAL	SHT.	SHEET		BREAK LINE
C/J	CONSTRUCTION JOINT	H.B.	HOSE BIBB	SHTHG.	SHEATHING		CONSTRUCTION FENCE
CRS	COURSES	INSUL.	INSULATION	SIM.	SIMILAR		
DET.	DETAIL	INT.	INTERIOR	SPEC.	SPECIFICATIONS		
DIA.	DIAMETER	JST.	JOIST	SQ.	SQUARE		
	DOUBLE	LAV.	LAVATORY	SS	SERVICE SINK		
	DOWN SPOUT	M.H.	MAN HOLE	STD.	STANDARD		

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16394 10-30-09 WILLIAM RATTERREE

PROJECT:

I-40 REST AREA

CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:

FACILITIES DESIGN

GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
RALEIGH, NORTH CAROLINA 27601
(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:

DESIGN DATA & ABBREVIATION

DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD, REGISTERED ARCHITECT 4271 10-30-09 NORTH CAROLINA RALEIGH, N.C.

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

NO.	REVISIONS/SUBMISSIONS	DATE

SHEET NO. T1 OF 2

APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: I-40 REST AREA & VENDING
Address: CATAWBA, NORTH CAROLINA
Proposed Use: BUSINESS (REST AREA)
Owner or Authorized Agent: GENERAL SERVICES, NCDOT Phone # 919-715-0400
Owned By: STATE OF NORTH CAROLINA ☐City/County ☐Private ☒State
Code Enforcement Jurisdiction: ☐City HICKORY ☐County CATAWBA

LEAD DESIGN PROFESSIONAL: VICTOR M. BUZARD Jr., R.A.

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	NCDOT	VICTOR M. BUZARD	424	(919) 715-9339	vbuzard@ncdot.gov
SITE "Civil"	NCDOT	ROBERT M. KOPESKY	1447	(919) 733-2920	bkopesky@ncdot.gov
Electrical	TRIANGLE ENGINEERING	JOEL HOBBY	7911	(919)878-6107	jhobby@triangleengineers.com
Fire Alarm					
Plumbing	TRIANGLE ENGINEERING	JOEL HOBBY	7911	(919)878-6107	jhobby@triangleengineers.com
Mechanical	TRIANGLE ENGINEERING	RICHARD R. KEIL	16343	(919)878-6107	rkeil@triangleengineers.com
Sprinkler-Standpipe					
Structural	NCDOT	W.E. RATTERREE	16394	(919) 715-9341	bratterree@ncdot.gov
Retaining Walls >5' High					
Other					

2006 EDITION OF NC CODE FOR: ☒New Construction ☐Addition ☐ Upfit
EXISTING: ☐Reconstruction ☐Alteration ☐Repair
CONSTRUCTED ____ ORIGINAL USE ____ RENOVATED ____ CURRENT USE ____

BUILDING DATA
Construction Type: ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A ☐ I-B ☐ II-B ☐ III-B ☒ V-B
Mixed construction: ☒ No ☐ Yes Types ____
Sprinklers: ☒ No ☐Partial ☐Yes ☒NFPA 13 ☐NFPA 13R ☐NFPA 13D
Standpipes: ☒ No ☐Yes Class ☐ I ☐ II ☐ III ☐Wet ☐Dry
Fire District: ☒ No ☐Yes Flood Hazard Area: ☒ No ☐Yes
Building Height: Feet 13'-9" Number of Stories 1
Mezzanine: ☒ No ☐Yes
Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
1st Floor		2,709 sf	2,709 sf
TOTAL		2,709 sf	2,709 sf

ALLOWABLE AREA
Primary Occupancy: ☐ Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
☒ Business ☐ Educational ☐ Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐1 ☐2 ☐3 ☐4 ☐5
☐ Mercantile ☐Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Utility and Miscellaneous ☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Secondary Occupancy: N/A
Mixed Occupancy: ☒ No ☐ Yes Separation: ____ Hr. Exception: ____

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 AREA	(C) AREA FOR OPEN SPACE INCREASE[1]	(D) AREA FOR SPRINKLER INCREASE[2]	(E) ALLOWABLE AREA OR UNLIMITED[3]	(F) MAXIMUM BUILDING AREA[4]
1	Business(B)	2,709	9,000	NOT USED	NOT USED	9,000	9,000

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type V-B		Type V-B	503
Building height in feet	Feet 40'	Feet=H+20'= N/A	Feet 13'-9"	503
Building Height in Stories	Stories 2	Stories+1= N/A	Stories 1	503

FIRE PROTECTION REQUIREMENTS
Life Safety Plan Sheet #, if Provided: N/A

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ - REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural frame, including columns, girders, trusses	-	0	0	-	-	-	-
Bearing walls							
Exterior							
North	30+	0	0	-	-	-	-
East	30	0	0	-	-	-	-
West	30	0	0	-	-	-	-
South	30+	0	0	-	-	-	-
Interior	-	0	0	-	-	-	-
Nonbearing Walls and Partitions Exterior Walls							
North	30	0	0	-	-	-	-
East	30	0	0	-	-	-	-
West	30+	0	0	-	-	-	-
South	30	0	0	-	-	-	-
Interior Walls and partitions	-	0	0	-	-	-	-
Floor construction Including supporting beams and joist	-	0	0	-	-	-	-
Roof construction Including supporting beams and joist	-	0	0	-	-	-	-
Shaft Enclosures-Exit	-	N/A	-	-	-	-	-
Shaft Enclosures-Other	-	N/A	-	-	-	-	-
Corridor Separation	-	N/A	-	-	-	-	-
Occupancy Separation	-	N/A	-	-	-	-	-
Party/Fire Wall Separation	-	N/A	-	-	-	-	-
Smoke Barrier Separation	-	N/A	-	-	-	-	-
Tenant Separation	-	N/A	-	-	-	-	-
Incidental Use Separation	-	N/A	-	-	-	-	-
Fire Barrier	-	N/A	-	-	-	-	-

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting:	☐ NO	☒ YES
Exit Signs:	☒ NO	☐ YES
Fire Alarm:	☒ NO	☐ YES
Smoke Detection Systems:	☒ NO	☐ YES
Panic Hardware:	☒ NO	☐ YES

EXIT REQUIREMENTS
NUMBER AND ARRANGEMENT OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NUMBER OF EXITS		TRAVEL DISTANCE		EGRESS (SECTION 1014.2) ARRANGEMENT MEANS OF [3]	
	REQUIRED	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1015.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
Business	1	2	200'	50'	N/A	42'

1 Corridor dead ends (Section 1016.3)
2 Single exits (Table 1018.2)
3 Common Path of Travel (Section 1013.3)

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(A) AREA[1] SQ. FT.	(B) AREA[1] PER OCCUPANT (TABLE 1004.1.2)	CALCULATED OCCUPANT LOAD	(C) EGRESS WIDTH PER OCCUPANT (TABLE 1005.1) STAIR	LEVEL	EXIT WIDTH (a)[2,3,4,5] REQUIRED WIDTH (SECTION 1005.1) (c+b)xc STAIR	LEVEL	ACTUAL WIDTH SHOWN ON PLANS STAIR	LEVEL
Business	1808	100	18	N/A	.2	N/A	3.6"	N/A	66"
Storage/Mech	535	300	2	N/A	.2	N/A	.36"	N/A	33"

STRUCTURAL DESIGN

DESIGN LOADS:
Importance Factors: Wind (I_w) 1.0
Snow (I_s) 1.0
Seismic (I_E) 1.0

Live Loads: Roof 20 psf Ext. Deck N/A psf
Mezzanine NA psf Attic Floor 10 psf
Floor 100 psf

Snow Load: 15 psf
Wind Load: Basic Wind Speed 90 mph (ASCE-7-05)
Exposure Category B
Wind Base Shears (for MWFRS) Vx = 5,400# Vy = 7,800#

SEISMIC DESIGN CATEGORY: A
Compliance with Section 1616.4 only? ☐ YES ☒ NO
SEISMIC DESIGN CATEGORY ☒ B ☐C ☐D
Provide the following Seismic Design Parameters:
Seismic Use Group 1
Spectral Response Acceleration S_S 0.280 %g S_1 0.096 %g
Site Classification D ☐ Field Test ☒ Presumptive
Basic structural system (check one)
X Bearing Wall ____ Dual w/Special Moment Frame
____ Building Frame ____ Dual w/Intermediate R/C or Special Steel
____ Moment Frame ____ Inverted Pendulum
Seismic base shear Vx= 4000# Vy= 4000#
Analysis Procedure X Simplified ____ Equivalent Lateral Force ____ Modal
Architectural, Mechanical, Components anchored? YES
LATERAL DESIGN CONTROL: Earthquake X Wind ____
SOIL BEARING CAPACITIES:
PRESUMPTIVE BEARING CAPACITY: 2000 psf

Rest Area Total Occupants is 20 Persons x 75% = 15 Persons by Code, [fixtures if's provided]

USE	WATERCLOSETS MALE	WATERCLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
EXISTING	--	--	--	--	--	--	--	--
NEW	6	12	6	6	6	N/A	1	1
REQUIRED	1	1	0	1	1	N/A	1	1

ACCESSIBLE PARKING

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED E.B.L.	W.B.L.	PROVIDED E.B.L.	W.B.L.	# OF ACCESSIBLE SPACES PROVIDED REGULAR WITH 5' ACCESS AISLE E.B.L.	W.B.L.	VAN SPACES WITH 8' ACCESS AISLE E.B.L.	W.B.L.	ACCESSIBLE PROVIDED TOTAL # E.B.L.	W.B.L.
LANE DIRECTION			41	45	2	2	1	1	3	3
CARS			6	6						
CAR/TRAILER			15	14						
TRUCKS			62	65						
TOTAL										

SPECIAL APPROVALS: N/A

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If energy cost budget method, state the annual energy cost budget vs allowable annual energy cost budget.

THERMAL ENVELOPE
Method of Compliance:
☒ Prescriptive ☐ Performance ☐ Energy Cost Budget
Climate Zone: 7a
Heating Degree days (base 65 degrees F): 3811
Cooling Degree days (base 50 degrees F): 4154
Project Type: New Construction
Vertical Glazing/Wall Area Pct.: N/A
Building Type: Office (Rest Area)

COMPONENT NAME / DESCRIPTION	GROSS AREA	CAVITY R-VALUE	CONT. R-VALUE	PROPOSED U-FACTOR	BUDGET U-FACTOR
ROOF 1: ALL-WOOD JOIST/RAFTER/TRUSS	2,709	0.0	38.0	0.032	0.070
SKYLIGHT 1: WOOD FRAME, DOUBLE PANE, CLEAR/DBSG, shgc 0.01	32	----	----	0.800	0.070
EXTERIOR WALL 1: WOOD FRAME, ANY SPACING	1891	0.0	19.0	0.046	0.108
WINDOW 1: WOOD FRAME, DOUBLE PANE CLEAR, shgc0.01	361	----	----	0.720	0.650
FLOOR 1: UNHEATED, SLAB-ON-GRADE, HORIZ. & VERT. INSUL 2FT.	228	----	7.5	----	----

ENVELOPE PASSES: DESIGN 30% BETTER THAN CODE

ELECTRICAL SUMMARY: SEE ELECTRICAL

MECHANICAL SUMMARY: SEE MECHANICAL

APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: I-40 REST AREA & VENDING
Address: CATAWBA, NORTH CAROLINA
Proposed Use: STORAGE (VENDING BLDG.)
Owner or Authorized Agent: GENERAL SERVICES, NCDOT Phone # 919-715-0400
Owned By: STATE OF NORTH CAROLINA ☐City/County ☐Private ☒State
Code Enforcement Jurisdiction: ☐City HICKORY ☐County CATAWBA

LEAD DESIGN PROFESSIONAL: VICTOR M. BUZARD Jr., R.A.

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	NCDOT	VICTOR M. BUZARD	4241	(919) 715-9339	vbuzard@ncdot.gov
SITE "Civil"	NCDOT	ROBERT N. KOPETSKY	1447	(919) 733-2920	bkopetsky@ncdot.gov
Electrical	TRIANGLE ENGINEERING	JOEL HOBBY	7911	(919) 678-6107	jhobby@trianglengineers.com
Fire Alarm					
Plumbing	TRIANGLE ENGINEERING	JOEL HOBBY	7911	(919) 678-6107	jhobby@trianglengineers.com
Mechanical	TRIANGLE ENGINEERING	RICHARD R. KEIL	16343	(919) 678-6107	rkeil@trianglengineers.com
Sprinkler-Standpipe					
Structural	NCDOT	W.E. RATTERREE	16394	(919) 715-9341	bratterree@ncdot.gov
Retaining Walls >5' High					
Other					

2006 EDITION OF NC CODE FOR: ☐New Construction ☐Addition ☐ Upfit
EXISTING: ☐Reconstruction ☐Alteration ☐Repair
CONSTRUCTED ____ ORIGINAL USE ____ RENOVATED X CURRENT USE ____

BUILDING DATA
Construction Type: ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A
☐ I-B ☐ II-B ☐ III-B ☒ V-B
Mixed construction: ☒ No ☐ Yes Types____
Sprinklers: ☒ No ☐Partial ☐Yes ☐NFPA 13 ☐NFPA 13R ☐NFPA 13D
Standpipes: ☒ No ☐Yes Class ☐ I ☐ II ☐ III ☐Wet ☐Dry
Fire District: ☒ No ☐Yes Flood Hazard Area: ☒ No ☐Yes
Building Height: Feet 12'-7" Number of Stories 1
Mezzanine: ☒ No ☐Yes
Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
1st Floor	1,557sf		1,557sf
TOTAL	1,557sf		1,557sf

ALLOWABLE AREA
Primary Occupancy: ☐ Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
☐ Business ☐ Educational Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ Mercantile ☐Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☒ S-2 Low ☐ High-piled
☐ Utility and Miscellaneous ☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Secondary Occupancy: N/A
Mixed Occupancy: ☒ No ☐ Yes Separation: ____ Hr. Exception: ____

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 AREA	(C) AREA FOR OPEN SPACE INCREASE[1]	(D) AREA FOR SPRINKLER INCREASE[2]	(E) ALLOWABLE AREA OR UNLIMITED[3]	(F) MAXIMUM BUILDING AREA*
1	Storage	1,557	13,500	NOT USED	NOT USED	13,500	13,500

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type V-B		Type V-B	503
Building height in feet	Feet 40'	Feet=H+20'= N/A	Feet 12'-7"	503
Building Height in Stories	Stories 2	Stories+1= N/A	Stories 1	503

FIRE PROTECTION REQUIREMENTS
Life Safety Plan Sheet #, if Provided: N/A

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ ___ REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural frame, including columns, girders, trusses	–	0	0	–	–	–	–
Bearing walls							
Exterior							
North	30	0	0	–	–	–	–
East	30	0	0	–	–	–	–
West	30	0	0	–	–	–	–
South	30	0	0	–	–	–	–
Interior	–	0	0	–	–	–	–
Nonbearing Walls and Partitions Exterior Walls							
North	30	0	0	–	–	–	–
East	30	0	0	–	–	–	–
West	30	0	0	–	–	–	–
South	30	0	0	–	–	–	–
Interior Walls and partitions	–	0	0	–	–	–	–
Floor construction including supporting beams and joist	–	0	0	–	–	–	–
Roof construction including supporting beams and joist	–	0	0	–	–	–	–
Shaft Enclosures-Exit	–	N/A	–	–	–	–	–
Shaft Enclosures-Other	–	N/A	–	–	–	–	–
Corridor Separation	–	N/A	–	–	–	–	–
Occupancy Separation	–	N/A	–	–	–	–	–
Party/Fire Wall Separation	–	N/A	–	–	–	–	–
Smoke Barrier Separation	–	N/A	–	–	–	–	–
Tenant Separation	–	N/A	–	–	–	–	–
Incidental Use Separation	–	N/A	–	–	–	–	–
Fire Barrier	–	N/A	–	–	–	–	–

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting:	☐ NO	☒ YES
Exit Signs:	☐ NO	☒ YES
Fire Alarm:	☒ NO	☐ YES
Smoke Detection Systems:	☐ NO	☒ YES
Panic Hardware:	☒ NO	☐ YES

EXIT REQUIREMENTS
NUMBER AND ARRANGEMENT OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NUMBER OF EXITS		TRAVEL DISTANCE		EGRESS (SECTION 1014.2) ARRANGEMENT MEANS OF[1,3]	
	REQUIRED	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1015.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
Storage	1	2	200'	33'	N/A	39'

1 Corridor dead ends (Section 1016.3)
2 Single exits (Table 1018.2)
3 Common Path of Travel (Section 1013.3)

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(A) AREA[1] SQ. FT.	(B) AREA[1] PER OCCUPANT (TABLE 1004.1.2)	CALCULATED OCCUPANT LOAD	(C) EGRESS WIDTH PER OCCUPANT (TABLE 1005.1)		EXIT WIDTH (in)[2,3,4,5,6] REQUIRED WIDTH (SECTION 1005.1) (a+b)xc		ACTUAL WIDTH SHOWN ON PLANS	
				STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL
VENDING	1,557	300	6	N/A	.2	N/A	1.04"	N/A	132"

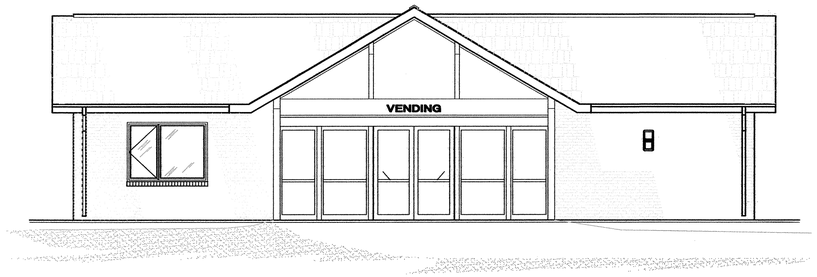
STRUCTURAL DESIGN: N/A

Adjacent Rest Area provides fixtures for the 6 occupants that may occupy the bldg. temporarily.

ACCESSIBLE PARKING: SEE SHEET T1

SPECIAL APPROVALS: N/A

ENERGY SUMMARY: EXISTING BUILDING



NORTH CAROLINA PROFESSIONAL SEAL 16394 NO. 20-09 ENGINEER WILLIAM RATTERREE

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
RALEIGH, NORTH CAROLINA 27601
(919) 715-0400 FAX (919) 715-0399

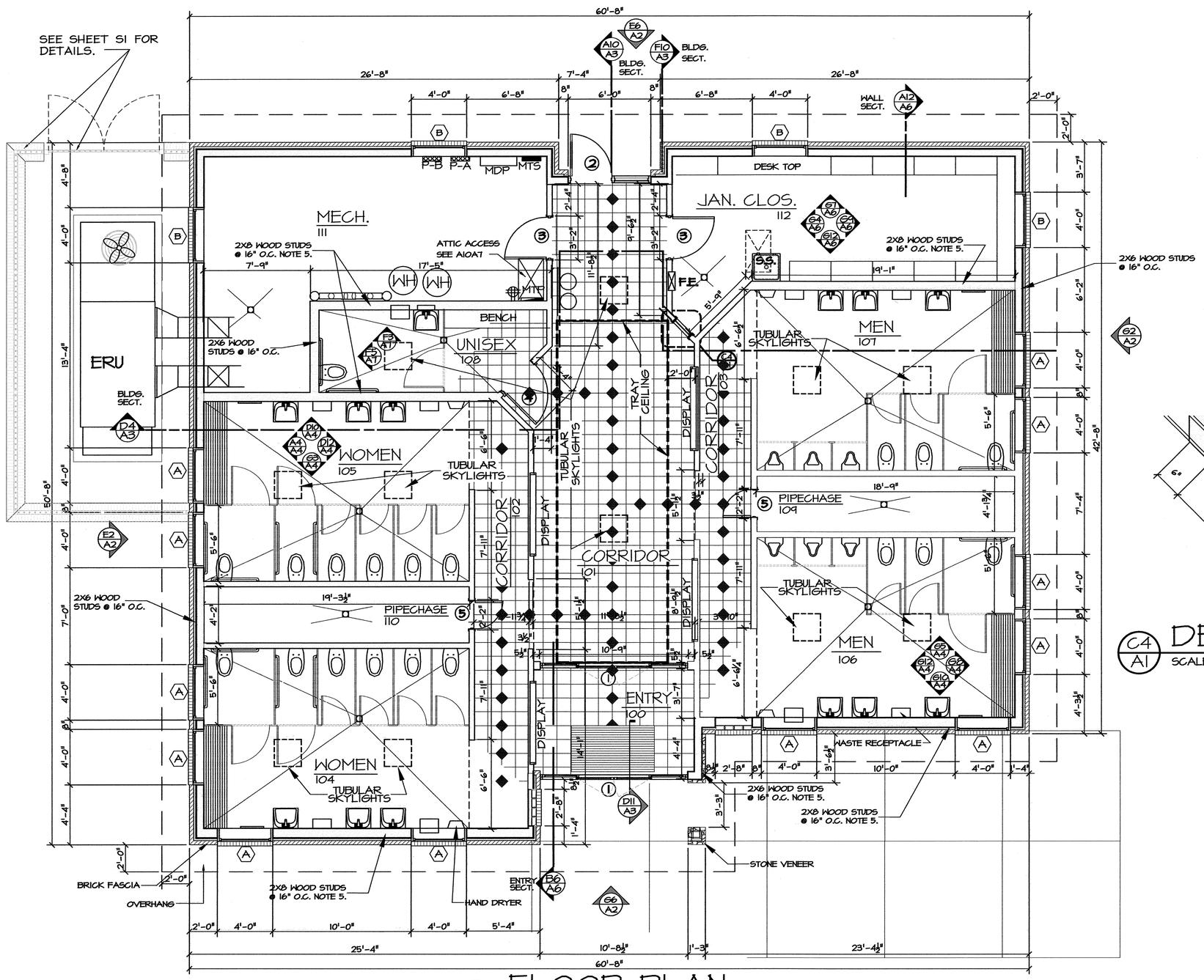
DRAWING TITLE:
DESIGN DATA FOR EXISTING BUILDINGS
DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD, Jr. REGISTERED ARCHITECT 4241 10-30-09 NORTH CAROLINA RALEIGH, N.C.

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

NO.	REVISIONS/SUBMISSIONS	DATE

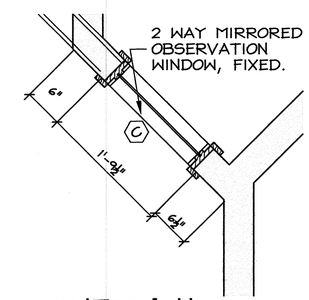
SHEET NO. T2 OF 2



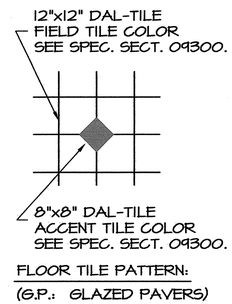
A9/A1 FLOOR PLAN
SCALE: 1/4" = 1'- 0"

GENERAL NOTES:

1. USE THIN-SET TILE INSTALLATION AT CONCRETE FLOORS & 5/8" TILE BACKER PANELS AT WOOD STUD WALLS. (WALL TILE MAY BE TO 5/8" DRYWALL W/ THE USE OF A WATERPROOF MEMBRANE EQUAL TO SCHLUTER SYSTEMS / DITRA).
2. INTERIOR ELEVATIONS FOR MEN 106 & WOMEN 105 SIMILAR TO ADJACENT ROOMS 107 & 104, RESPECTIVELY.
3. PROVIDE 5/8" DRYWALL @ ALL CEILING/ROOF JOIST.
4. ALL FINISHED FLOOR ELEVATIONS ARE 100'-0" AND ALL FLOOR DRAINS SHALL BE SET AT 99'-10 1/2".
5. ALL EXTERIOR WOOD STUDS SHALL BE 2x6's @ 16" O.C. EXCEPT AT LAVITORY WALLS THAT ARE 2x8's @ 16" OC. PROVIDE TOILET ACCESSORY BLOCK-OUTS PER ELEVATIONS. SEE DETAILS F5A4, F10A4 & NOTE "F" FOR ADDITIONAL INFORMATION.
6. DIMENSIONS ARE NOMINAL AND ARE TO ALLOW FOR FINISHES. EXTERIOR DIMENSIONS ARE TO APPROXIMATE FACE OF SHEATHING.
7. PROVIDE TOILET PARTITION DOOR W/ PILASTERS @ INTERIOR OF RESTROOM 108. PROVIDE SOLID WOOD BLOCKING FOR ALL TOILET PARTITIONS & ACCESSORIES.
8. DO NOT OVERLAP FIXTURE ELECTRONIC CONTROLS WITH GRAB BARS.
9. CENTER FLOOR ACCENT GLAZED PAVERS OFF CORRIDOR 101 & PIPE CHASE DOORS AS INDICATED.



C4/A1 DETAIL MIRRORED WINDOW
SCALE: 1" = 1'- 0"



FLOOR TILE PATTERN:
(G.P.: GLAZED PAVERS)

C2/A1 DETAIL TILE PATTERNS
SCALE: 1/2" = 1'- 0"

TILE NOTE:
SEE SPEC. FOR EQUAL OR COMPETITIVE MANUFACTURERS

PROJECT:
I-40 REST AREA
CATAWBA COUNTY — NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
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(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:
FLOOR PLAN REST AREA

DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

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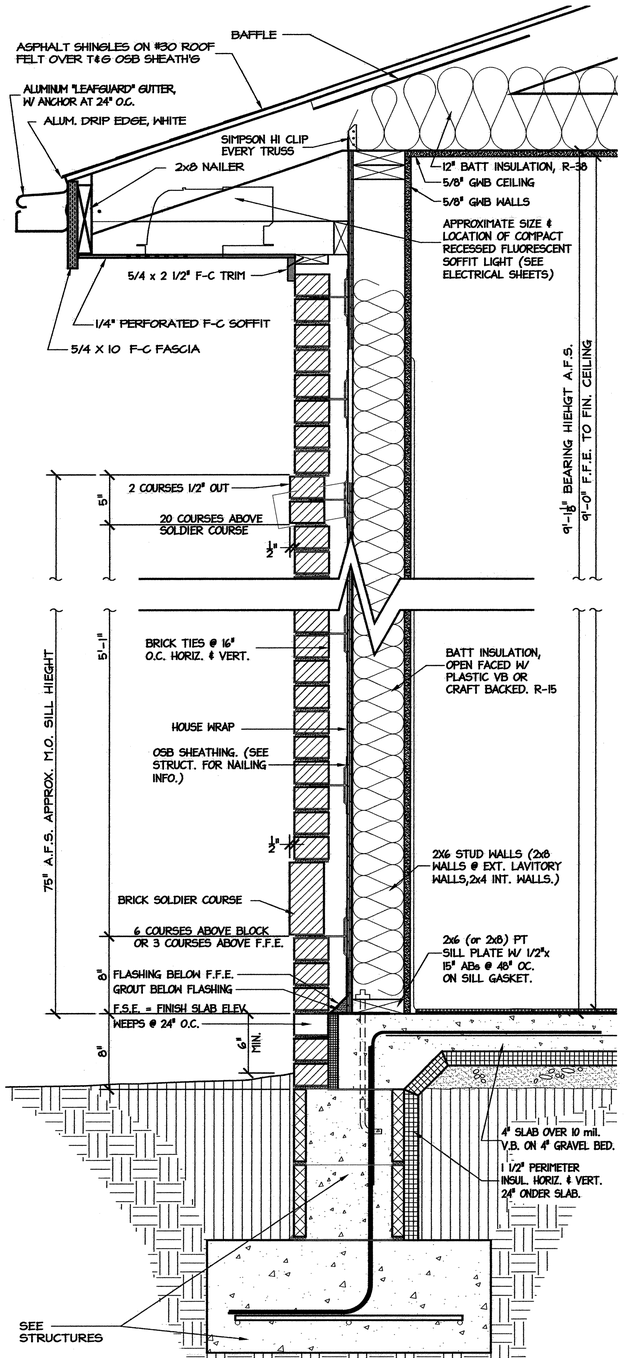
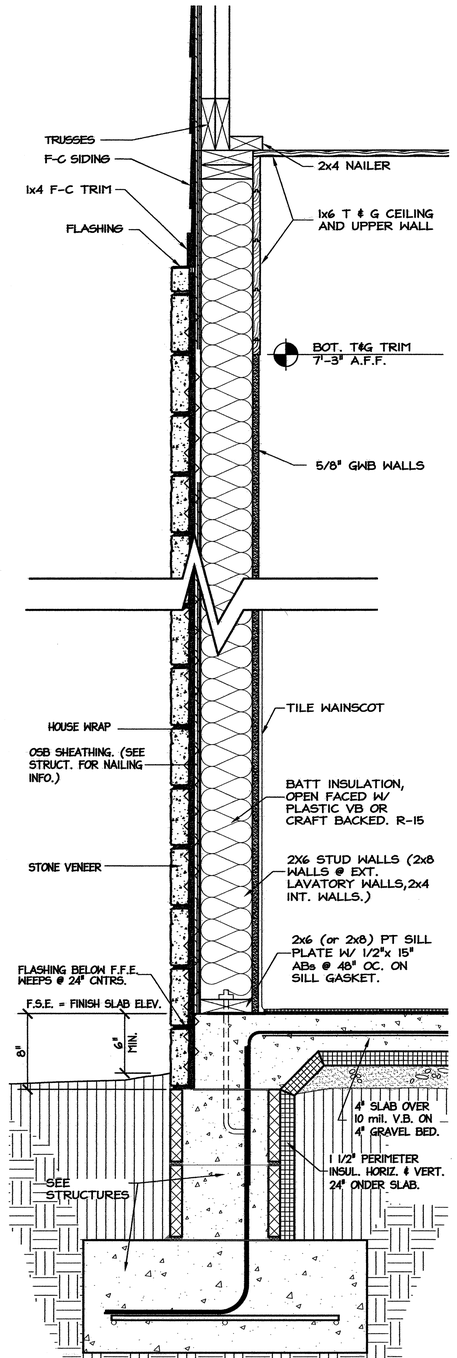
SHEET NO. A1 OF 7



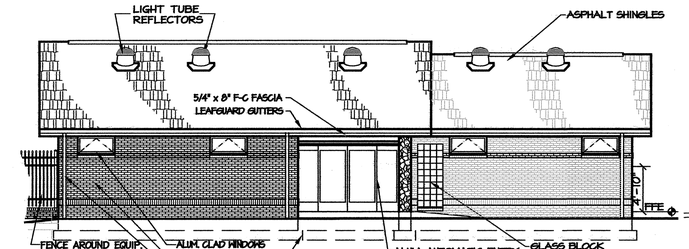
A12/A2 WALL SEC. TYPICAL

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



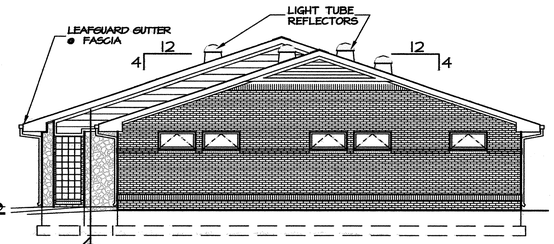
A8/A2 WALL SEC. @ STONE ENTRY

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



G6/A2 EAST ELEV.

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

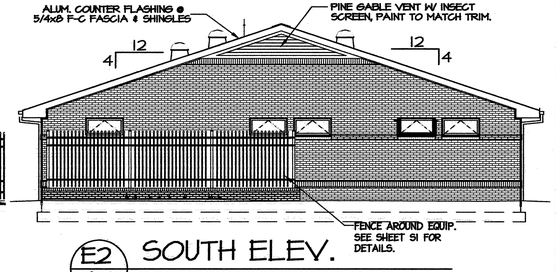


G2/A2 NORTH ELEV.

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

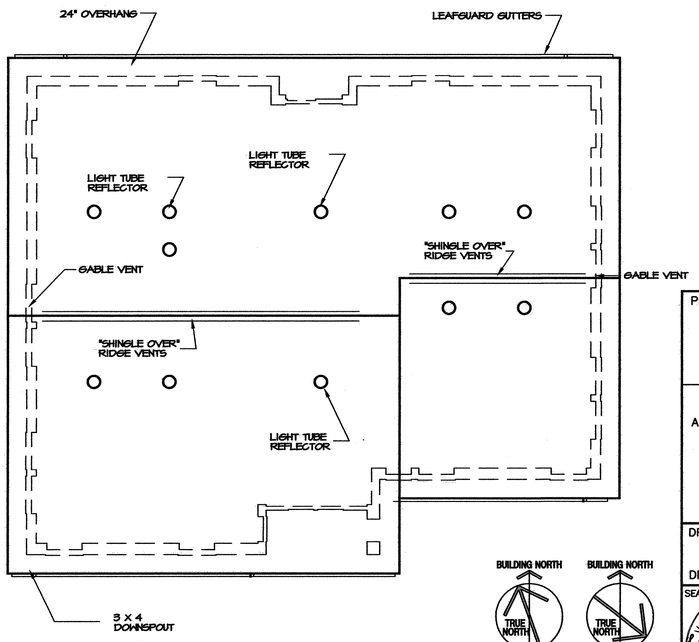
E6/A2 WEST ELEV.

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



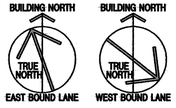
E2/A2 SOUTH ELEV.

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



A10/A2 ROOF PLAN

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



PROJECT:

I-40 REST AREA

CATAWBA COUNTY — NORTH CAROLINA

ARCHITECT/ENGINEERS:

FACILITIES DESIGN

GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
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(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:

EXT. ELEVATIONS & ROOF PLAN

DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD, REGISTERED ARCHITECT, 4241, NORTH CAROLINA, RALEIGH, N.C. — 10-30-09

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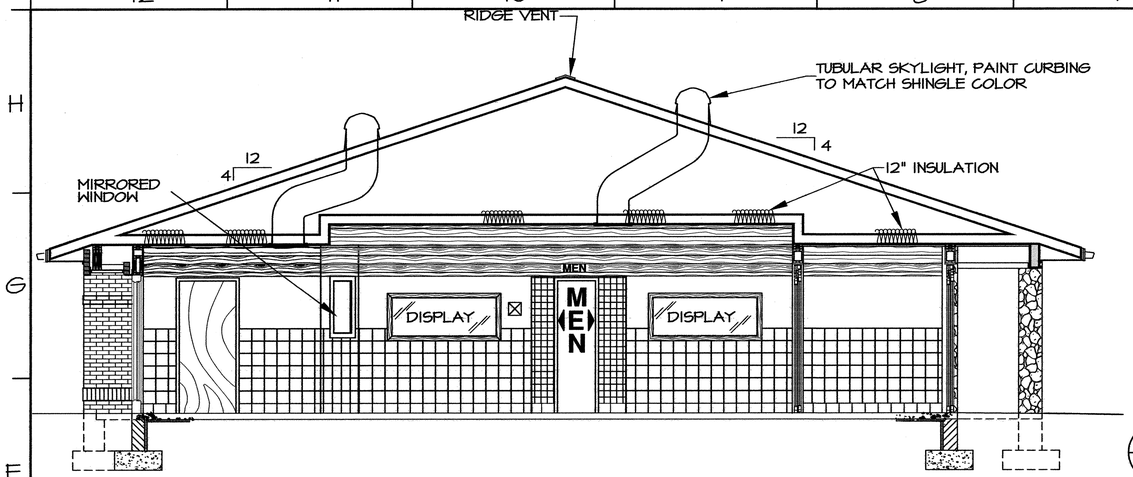
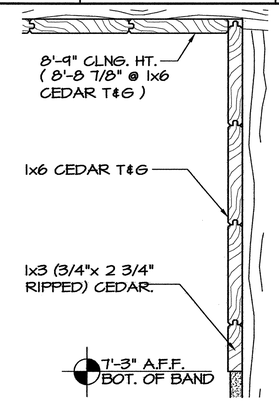
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

NO.	REVISIONS/SUBMISSIONS	DATE

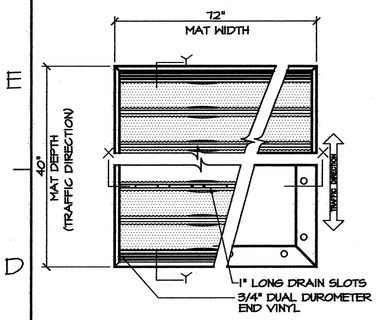
SHEET NO. A2 OF 7



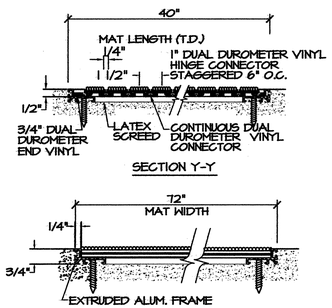
A10/A3 BUILDING SECTION
SCALE: 1/4" = 1'- 0" LOOKING SOUTH



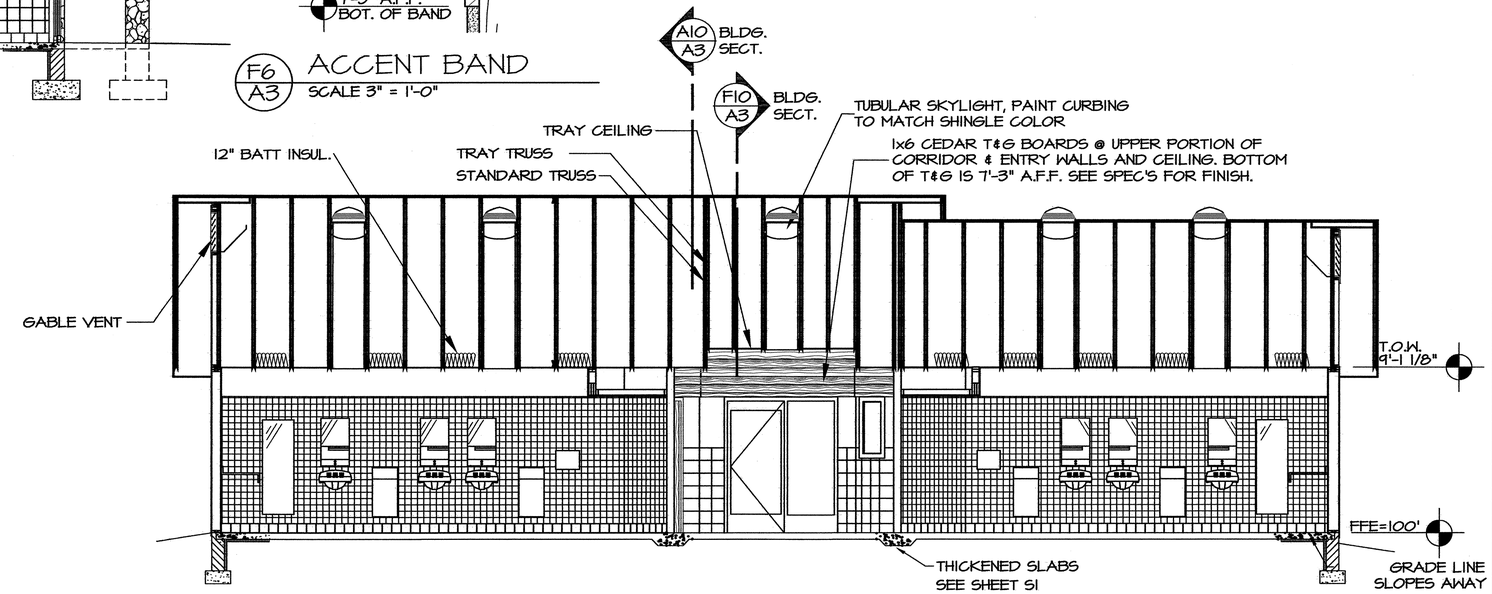
F6/A3 ACCENT BAND
SCALE 3" = 1'-0"



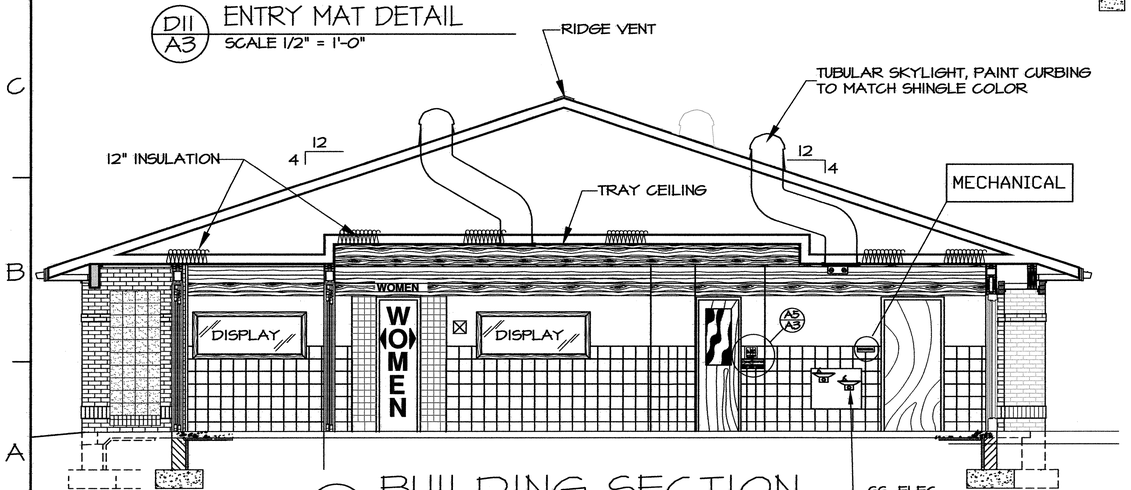
MAT WITH BLOCK OUT FRAME



D11/A3 ENTRY MAT DETAIL
SCALE 1/2" = 1'-0"



D4/A3 BUILDING SECTION
SCALE: 1/4" = 1'- 0" LOOKING WEST



A10/A3 BUILDING SECTION
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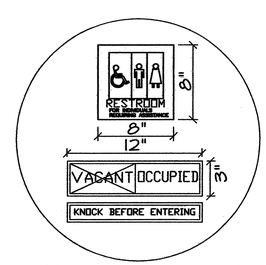

A5/A3 UNISEX RM. SIGN

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
RALEIGH, NORTH CAROLINA 27601
(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:
BUILDING SECTIONS

DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD REGISTERED ARCHITECT 4241 NORTH CAROLINA 10-30-09 RALEIGH, N.C.

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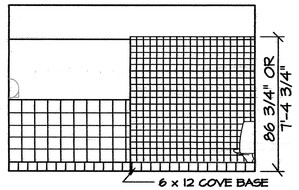
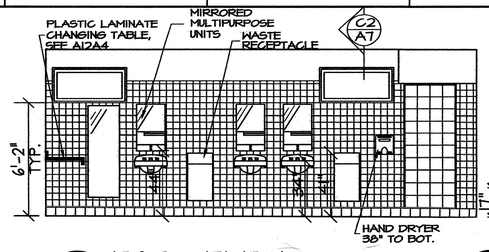
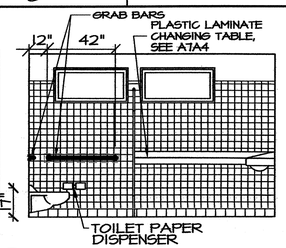


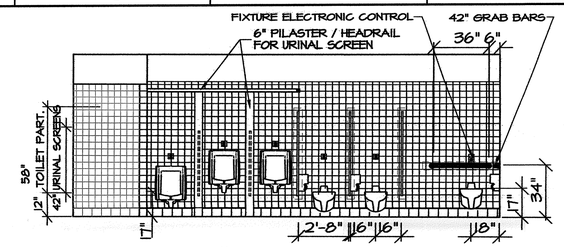
G12 / A4 SOUTH ELEV.
SCALE: 1/4" = 1'- 0" MEN



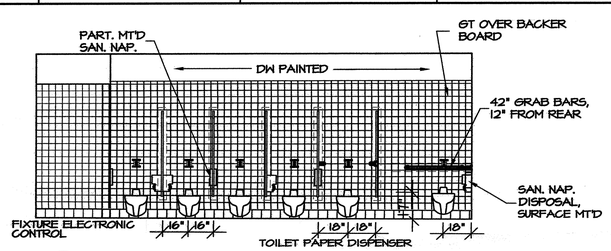
G10 / A4 EAST ELEV.
SCALE: 1/4" = 1'- 0" MEN 106



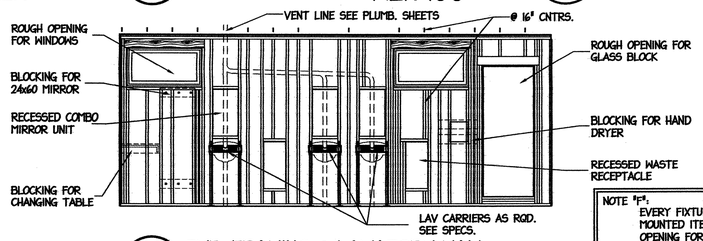
G8 / A4 NORTH ELEV.
SCALE: 1/4" = 1'- 0" MEN



G5 / A4 WEST ELEV.
SCALE: 1/4" = 1'- 0" MEN

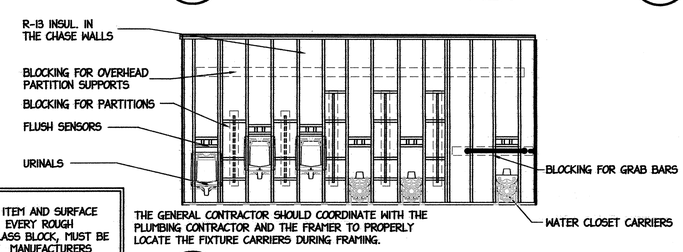


G3 / A4 EAST ELEV.
SCALE: 1/4" = 1'- 0" WOMEN



F10 / A4 TYP. FRAMING @ LAVATORY WALL
SCALE: 1/4" = 1'- 0" MEN 106

NOTE #3:
EVERY FIXTURE, CARRIER, RECESSED ITEM AND SURFACE MOUNTED ITEM REQUIRING BLOCKING, EVERY ROUGH OPENING FOR WINDOWS, DOORS OR GLASS BLOCK, MUST BE THOROUGHLY EXAMINED THROUGH THE MANUFACTURERS INSTALLATION LITERATURE, IN ORDER TO INSURE THAT THE WALL FRAMING IS DONE PROPERLY.

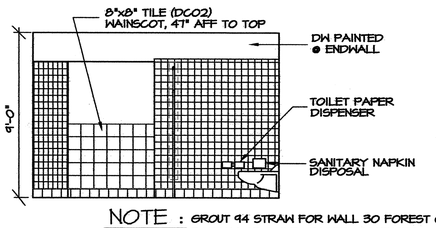


THE GENERAL CONTRACTOR SHOULD COORDINATE WITH THE PLUMBING CONTRACTOR AND THE FRAMER TO PROPERLY LOCATE THE FIXTURE CARRIERS DURING FRAMING.

F5 / A4 TYP. FRAMING @ TOILET WALL
SCALE: 1/4" = 1'- 0" MEN

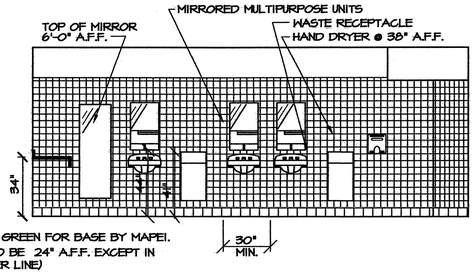
GENERAL NOTES:

1. USE THIN-SET TILE INSTALLATION AT CONCRETE FLOORS & TILE BACKER PANELS AT WOOD STUD WALLS.
2. INTERIOR ELEVATIONS FOR MEN 109 & WOMEN 102 SIMILAR TO ADJACENT ROOMS 111 & 104.
3. PROVIDE 5/8" DRYWALL @ ALL CEILING/ROOF JOIST.
4. ALL FINISHED FLOOR ELEVATIONS ARE 100'-0" AND ALL FLOOR DRAINS SHALL BE SET AT 99'-10 1/2".
5. DIMENSIONS ARE NOMINAL AND ARE TO ALLOW FOR FINISHES.
6. DO NOT OVERLAP FIXTURE ELECTRONIC CONTROLS WITH GRAB BARS.
7. SECURE < 3 x 3 x 1/4" PERIMETER FRAME, WELD MITERED CORNERS; ANCHOR TO WALLS & PLASTIC LAMINATE COUNTER & TOILET PARTITION W/ S.S. SCREWS AND BOLTS.
8. PROVIDE INSULATION ON ALL WASTE LINES BELOW LAVATORIES.

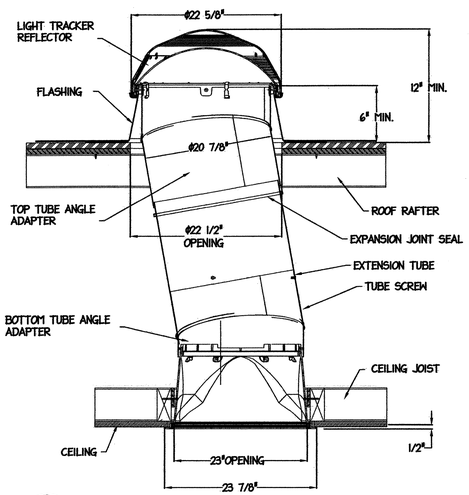


NOTE : GROUT 94 STRAW FOR WALL 30 FOREST GREEN FOR BASE BY MAPEI.
BOTTOM OF TOILET PAPER DISPENSER TO BE 24" A.F.F. EXCEPT IN HANDICAPPED STALLS (19" MIN. TO CENTER LINE)

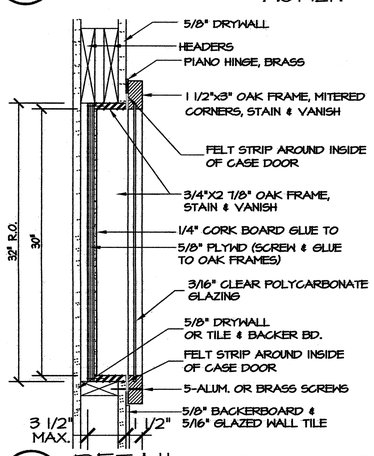
D12 / A4 NORTH ELEV.
SCALE: 1/4" = 1'- 0" WOMEN



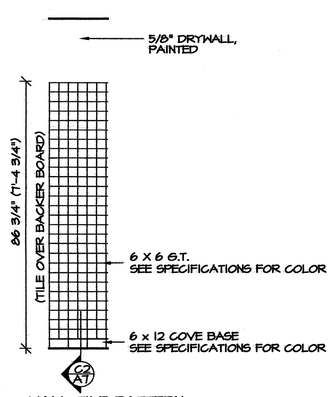
D10 / A4 WEST ELEV.
SCALE: 1/4" = 1'- 0" WOMEN 105



C7 / A4 DETAIL- TUBULAR SKYLIGHT
SCALE: 1 1/2" = 1'- 0" (SIM. TO SOLATUBE)

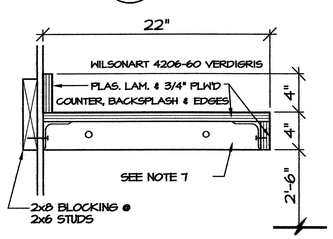


A12 / A4 DETAIL DISPLAY CASE
SCALE: 3/4" = 1'- 0"

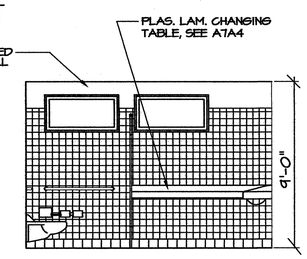


WALL TILE PATTERN:

A9 / A4 DETAIL TILE PATTERNS
SCALE: 1/2" = 1'- 0"



A7 / A4 DETAIL CHANGING TABLE
SCALE: 3/4" = 1'- 0"



A4 / A4 SOUTH ELEV.
SCALE: 1/4" = 1'- 0" WOMEN

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
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DRAWING TITLE:
INTERIOR ELEVATIONS & DETAILS

DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD REGISTERED ARCHITECT 4241 NORTH CAROLINA RALEIGH, N.C. 10-30-09

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

NO.	REVISIONS/SUBMISSIONS	DATE

SHEET NO. A4 OF 7

FINISH - COLOR SCHEDULE

ROOM	NO.	FLOOR MAT.	FLOOR COLOR	BASE MAT.	BASE COLOR	NORTH WALL MAT.	NORTH WALL COLOR	EAST WALL MAT.	EAST WALL COLOR	SOUTH WALL MAT.	SOUTH WALL COLOR	WEST WALL MAT.	WEST WALL COLOR	CEILING MAT.	CEILING COLOR	HEIGHT	REMARKS
ENTRY	100	G.P.	SEE SPECS.	G.P.	SEE SPECS.	G.P./DW	SEE SPECS.	DW (OVER DOORS)	SEE SPECS.	GT/DW	SEE SPECS.	DW (OVER DOORS)	SEE SPECS.	T&G	SEE SPECS.	9'-0"	1x6 CEDAR TONGUE AND GROOVE
CORRIDOR	101	G.P.		G.P.		G.P./DW		-		GT/DW		GT/DW		T&G		VARIES	1x6 CEDAR TONGUE AND GROOVE
CORRIDOR	102	G.P.		G.P.		G.P./DW		G.B. *		GP/DW		G.P.		DW		7'-3"	CEILIG HT. @ RESTRM. ENTRY 7'-3", 8X8 TILE WAINSCOT @47"AFF
CORRIDOR	103	G.P.		G.P.		G.P./DW		G.B. *		GP/DW		G.P.		DW		7'-3"	CEILIG HT. @ RESTRM. ENTRY 7'-3", 8X8 TILE WAINSCOT @47"AFF
WOMEN'S RESTRM	104	G.P.		G.P.		GT/DW		GT/DW		GT/DW		GT/DW		DW		9'-0"	* WALL TILE W/ ACCENT BAND, SEE SPEC.
WOMEN'S RESTRM	105	G.P.		G.P.		GT/DW		GT/DW		GT/DW		GT/DW		DW			* WALL TILE W/ ACCENT BAND, SEE SPEC.
MEN'S RESTRM	106	G.P.		G.P.		GT/DW		GT/DW		GT/DW		GT/DW		DW			* WALL TILE W/ACCENT BAND, SEE SPEC.
MEN'S RESTRM	107	G.P.		G.P.		GT/DW		GT/DW		GT/DW		GT/DW		DW			* WALL TILE W/ACCENT BAND, SEE SPEC.
RESTROOM	108	G.P.		G.P.		GT/DW		GT/DW		GT/DW		GT/DW		DW			* WALL TILE W/ ACCENT BAND, SEE SPEC.
PIPECHASE	109	CONC.		-		DW		DW		DW		DW		DW			
PIPECHASE	110	CONC.		-		DW		DW		DW		DW		DW			
MECHANICAL	111	CONC.		RUBBER		DW		DW		DW		DW		DW			
JANITOR CLOS.	112	VCT	↓	RUBBER	↓	DW	↓	DW	↓	DW	↓	DW	↓	DW	↓	↓	PAINT WOOD SHELVING

DOOR - HARDWARE SCHEDULE

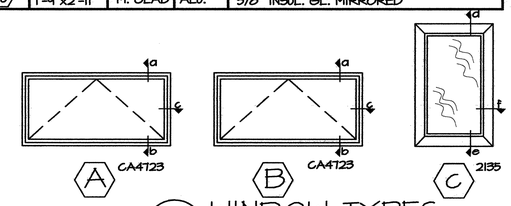
DOOR MARK	DOOR SIZE	DOOR MAT.	DOOR COLOR	FRAME MAT.	FRAME COLOR	HARDWARE LOCKSET	HARDWARE HINGES	HARDWARE CLOSER	HARDWARE STOP	HARDWARE PLATE KICK	HARDWARE WEATHS'P/ THRESHOLD	HARDWARE PUSH/ PULL	REMARKS
1	6'-0"X7'-0"	AL	BRONZE	AL	BRONZE	KEY LOCK/EGRESS					ALUM.		AUTO. SLIDING DOOR W/ SIDELIGHTS, SEE NOTE 3.
2	3'-0"X7'-0"	H.M.	BRONZE	H.M.	BRONZE	F04	A5112	C02022	L02162		316A5/114/664		INSULATED DOOR, 1" INSUL. LAM. GLASS
3	3'-0"X7'-0"X1 3/4"	SC	WINTER WHITE	H.M.	3066 09/106	F04	A5112	C02022	L02162	-	3/8" MARBLE	-	20 MIN. RATED DOOR @ JAN. CL. DOOR ONLY.
4	3'-0"X7'-0"X1 3/4"	SC	WINTER WHITE	H.M.	3066 09/106	F01	A5112	C02022	L02162	-	3/8" MARBLE	-	
5	2'-0"X7'-0"X1 3/4"	H.M.	90RR 11/257	H.M.	3066 09/106	F17	A5112	C02511		-	3/8" MARBLE	-	DEAD BOLT LOCKSET

ABBREVIATIONS:

AL.	ALUMINUM
CONC.	CONCRETE, EXPOSED SLAB
DW	DRYWALL PAINTED (GLIDDEN, OR EQUAL TO DEVOS, MOORE, P&L, OR SW, SEE SPEC)
GT	GLAZED TILE / WALL (DAL TILE OR EQUAL TO AMER. OLEAN OR FLORIDA TILE, SEE SPEC.)
H.M.	HOLLOW METAL DOORS & FRAMES
SC	SOLID CORE WOOD, OAK (ICI GLIDDEN "WHITE ON WHITE" OR EQUAL, P&L OR SW)
G.P.	GLAZED PAVERS / FLOOR & BASE (DAL-TILE OR EQUAL, SEE SPEC.)

WINDOW SCHEDULE

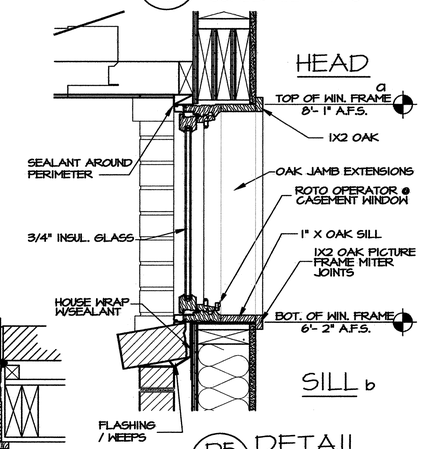
MARK:	OPENING SIZE:	FRAME: MAT.	FRAME: COLOR	REMARKS:
A	3'-11"x1'-11"	M. CLAD	BROWN	5/8" INSUL. GL. OBSCURE
B	3'-11"x1'-11"	M. CLAD	BROWN	5/8" INSUL. GL. CLEAR
C	1'-9"x2'-11"	M. CLAD	ALU.	5/8" INSUL. GL. MIRRORED



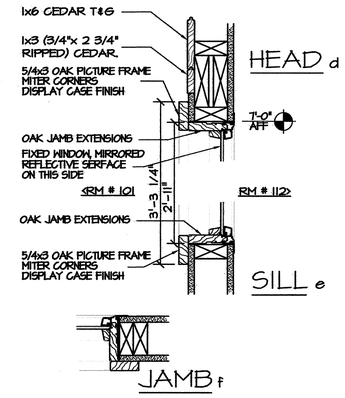
65/A5 WINDOW TYPES
SCALE: 1/2" = 1'- 0"

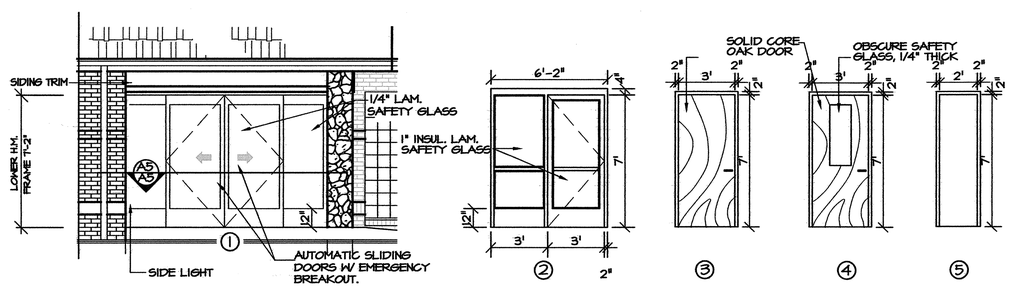
GENERAL NOTES:

1. METAL CLAD WINDOWS SHALL BE TRIMMED OUT TO MATCH WALL THICKNESS (2X4, 2X6 & 2X8).
2. SEE SHEET A1 FOR ACCENTS IN GLAZED PAVER TILE FLOOR @ LOBBY, AND THE SPEC'S. FOR ACCENT BANDS @ GLAZED WALL TILE.
3. EXTERIOR SLIDING DOORS W/ EMERGENCY EGRESS FUNCTION, & 30 lbs. FORCE PER NC BLDG. CODE & BHMA A156.19.
4. SEE SPEC. FOR EQUAL OR COMPETITIVE FINISH PRODUCT MANUFACTURERS.

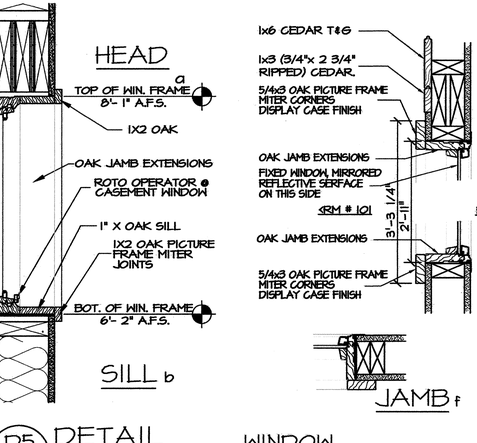


D5/A5 DETAIL WINDOW
SCALE: 1 1/2" = 1'- 0"

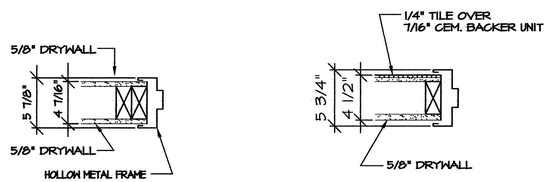




B12/A5 DOOR (MARK) TYPES
SCALE: 1/4" = 1'- 0"

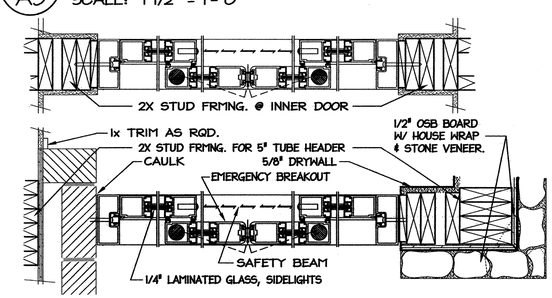


C6/A5 DETAIL TYPICAL JAMB
SCALE: 1 1/2" = 1'- 0"



A10/A5 DETAIL EXT. H.M.
SCALE: 1 1/2" = 1'- 0"

A8/A5 DETAIL INT. H.M.
SCALE: 1 1/2" = 1'- 0"



EXTERIOR
A5/A5 DETAIL ENTRY FRAM'G
SCALE: 1 1/2" = 1'- 0"

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
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(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:
FINISH, WINDOWS AND DOORS SCHEDULES

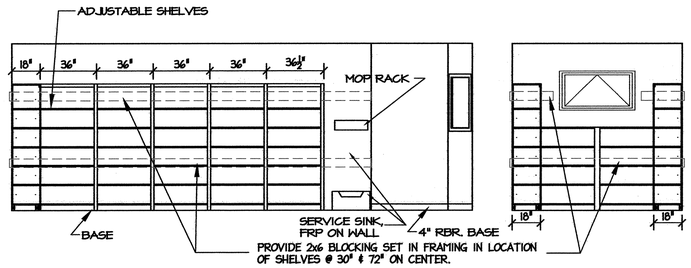
DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD REGISTERED ARCHITECT 4241 10-30-09 NORTH CAROLINA RALEIGH, N.C.

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

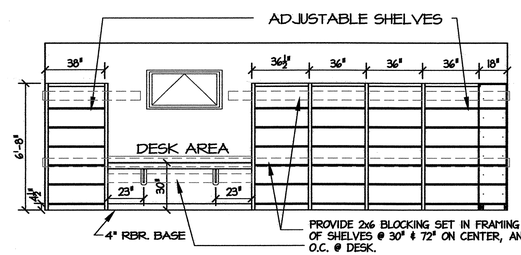
NO.	REVISIONS/SUBMISSIONS	DATE

SHEET NO. A5 OF 7

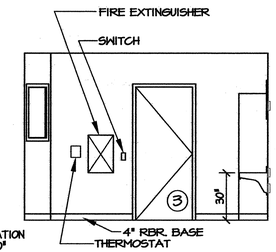


G12 / A6 EAST ELEV.
SCALE: 1/4" = 1'- 0"
JANITOR 112

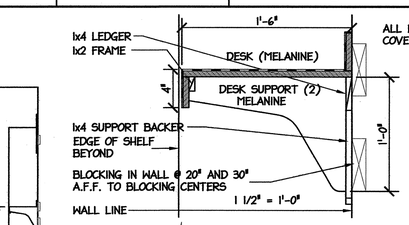
G9 / A6 NORTH ELEV.
SCALE: 1/4" = 1'- 0"
JANITOR 112

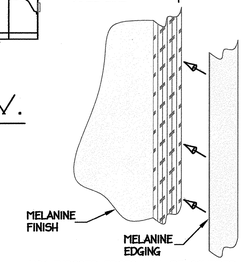


G7 / A6 WEST ELEV.
SCALE: 1/4" = 1'- 0"
JANITOR 112



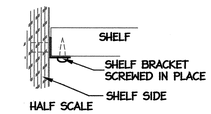
G4 / A6 SOUTH ELEV.
SCALE: 1/4" = 1'- 0"
JANITOR 113



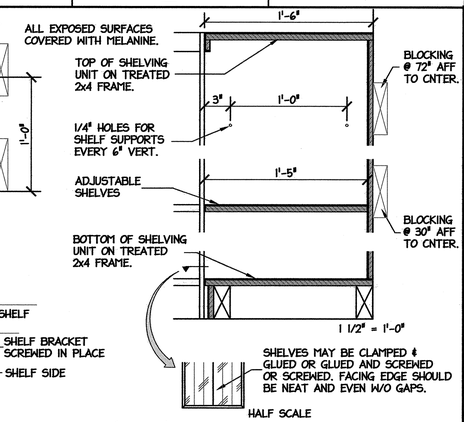


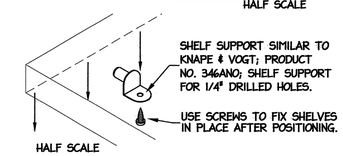
ANY EXPOSED EDGES WILL BE COVERED WITH AN EDGING STRIP TRIMMED NEATLY.

HALF SCALE



HALF SCALE

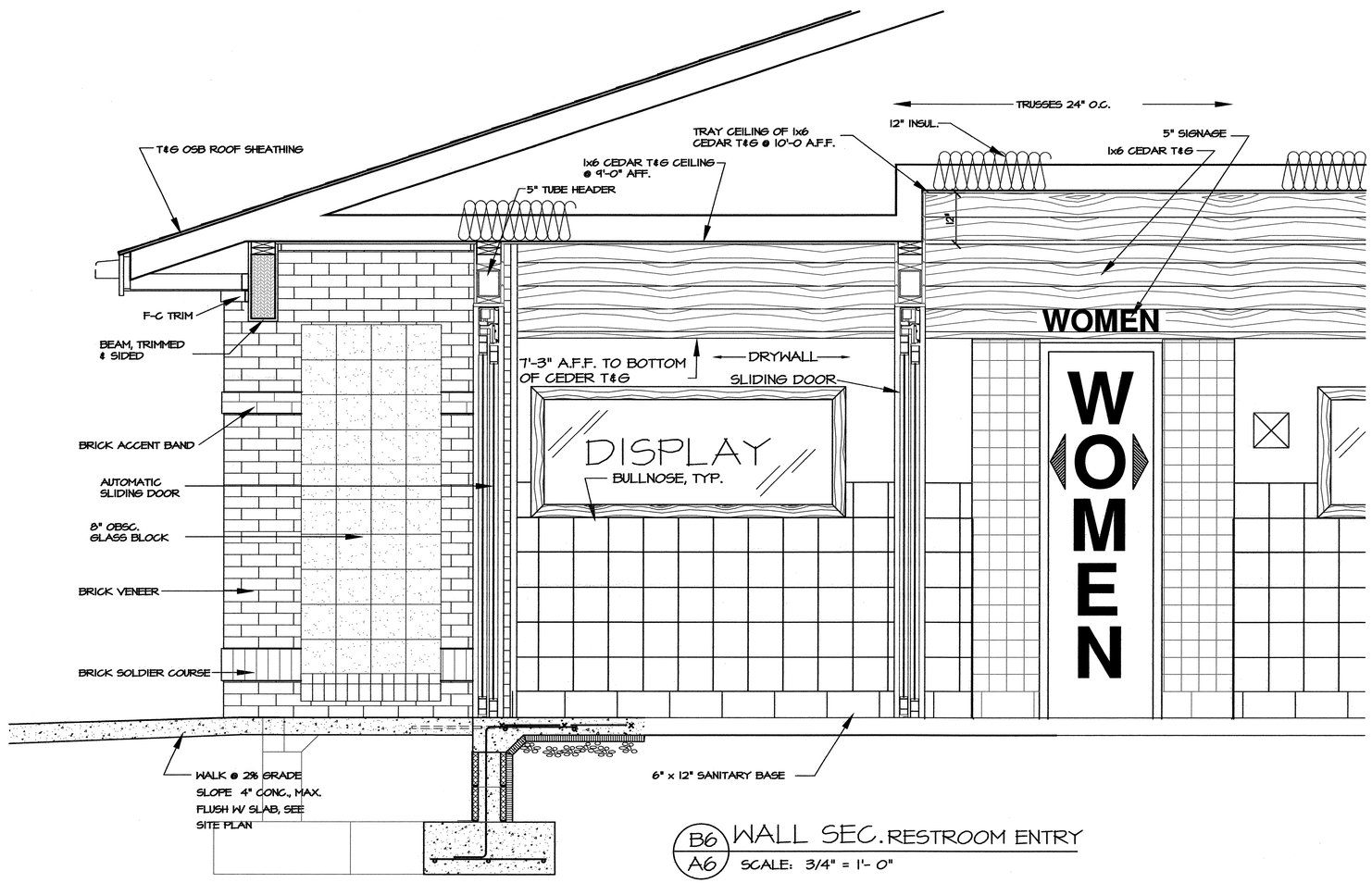




E3 / A6 DETAILS & SECTIONS: @ SHELVES
SCALE: AS NOTED

GENERAL NOTES:

1. ALUMINUM "LEAFGUARD" GUTTER, W/ ANCHOR AT 24" O.C. SEE SPEC. FOR EQUAL OR COMPETITIVE MANUFACTURER.
2. STAIN & VARN. ALL WOOD SHELVING @ STORAGE 108



B6 / A6 WALL SEC. RESTROOM ENTRY
SCALE: 3/4" = 1'- 0"

PROJECT:
I-40 REST AREA
CATAWBA COUNTY — NORTH CAROLINA

ARCHITECT/ENGINEERS:
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DRAWING TITLE:
WALL SECTIONS & ELEVATIONS

DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD, JR. REGISTERED ARCHITECT 4241 NORTH CAROLINA RALEIGH, N.C. 10-30-09

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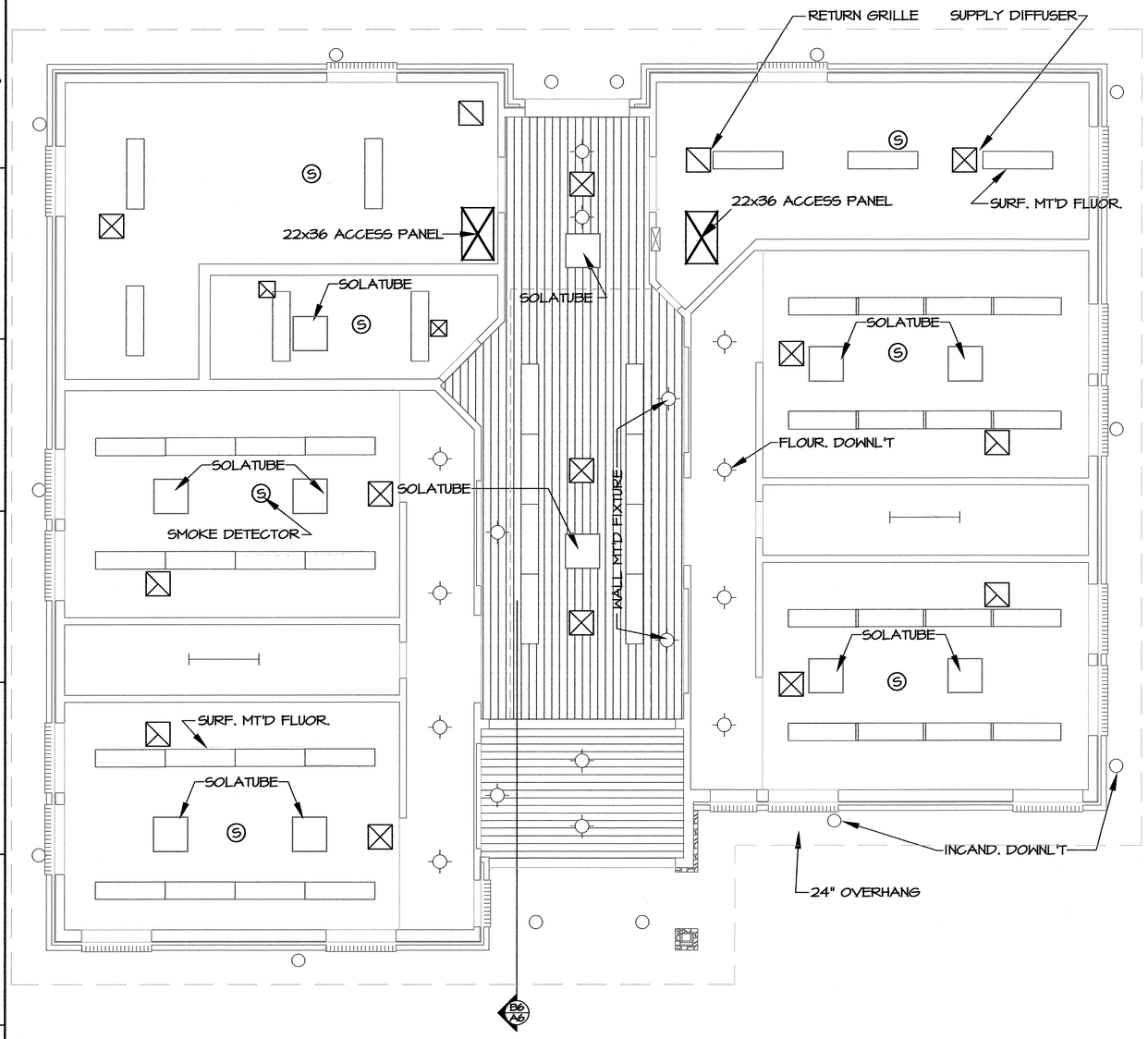
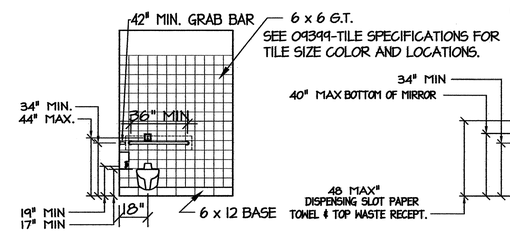
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

NO.	REVISIONS/SUBMISSIONS	DATE

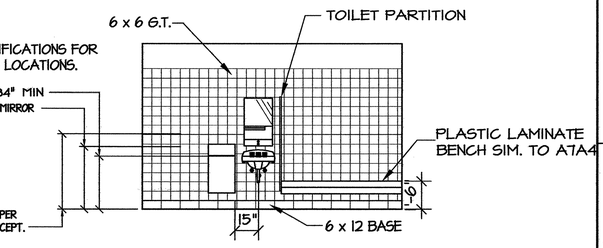
SHEET NO. A6 OF 7



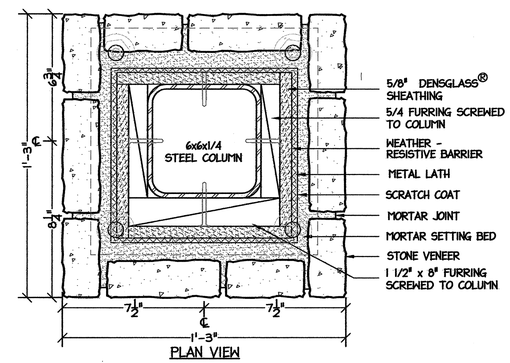
A10 / A7 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'- 0"



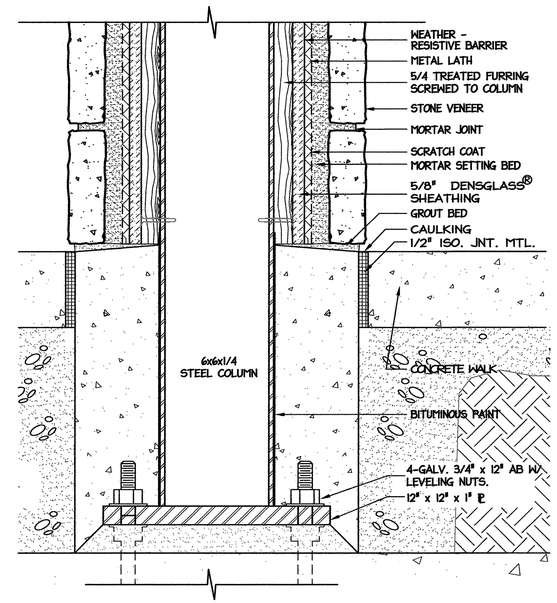
F5 / A7 SOUTH ELEV.
SCALE: 1/4" = 1'- 0" UNISEX 108



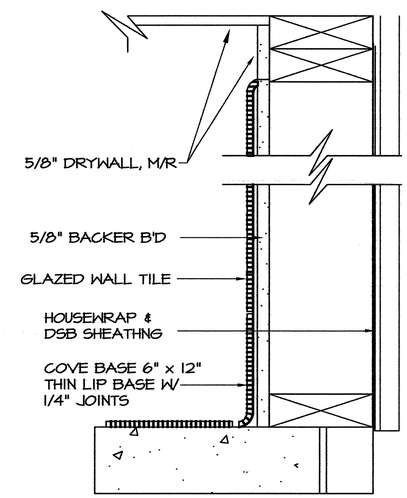
F3 / A7 WEST ELEVATION
SCALE: 1/4" = 1'- 0" UNISEX 108



PLAN VIEW



A5 / A7 COLUMN
SCALE: 3" = 1'- 0"



C2 / A7 DETAIL- TILE WORK
SCALE: 3" = 1'- 0"

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
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(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:
REFLECTED CEILING PLAN & DETAILS

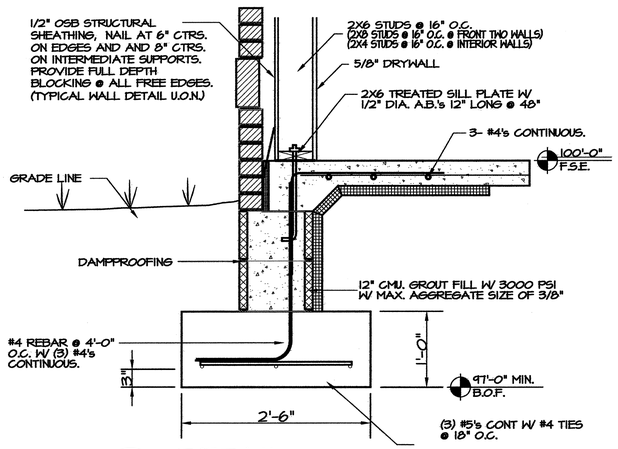
DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD, JR. REGISTERED ARCHITECT 4241 NORTH CAROLINA RALEIGH, N.C. 10-30-09

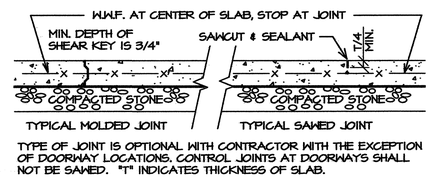
TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.3.ST1	C202172	STM-040-2(146)117

NO.	REVISIONS/SUBMISSIONS	DATE

SHEET NO. A7 OF 7

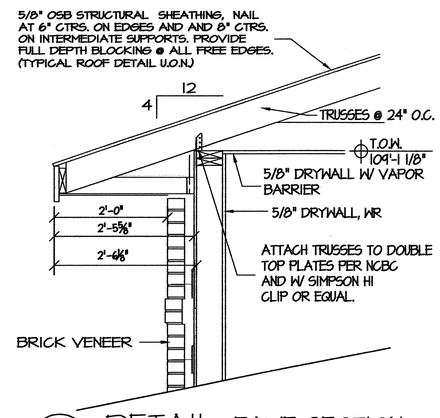


2/S1 DETAIL: WALL FOOTING
SCALE 1" = 1'-0"

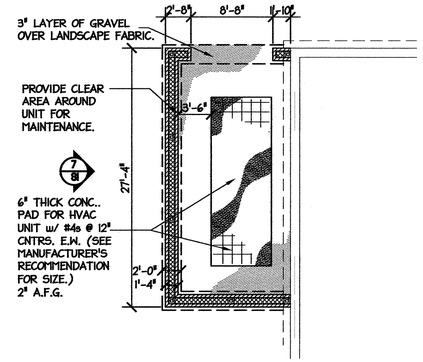


TYPE OF JOINT IS OPTIONAL WITH CONTRACTOR WITH THE EXCEPTION OF DOORWAY LOCATIONS. CONTROL JOINTS AT DOORWAYS SHALL NOT BE SAWED. "T" INDICATES THICKNESS OF SLAB.

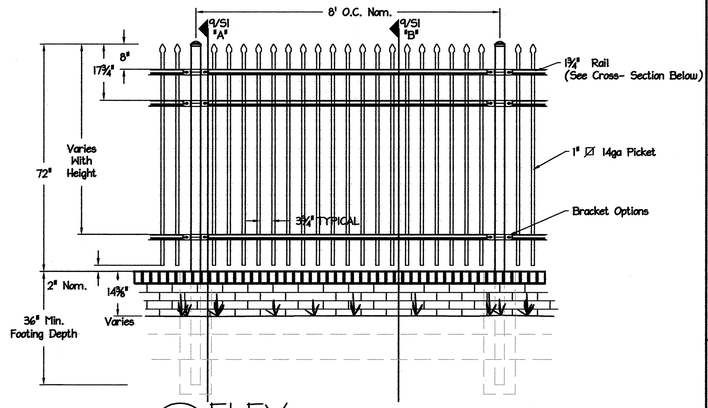
3/S1 DETAIL: CONTROL JOINT
SCALE 1" = 1'-0"



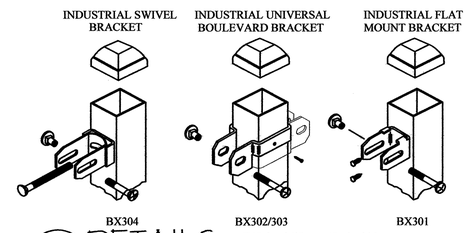
4/S1 DETAIL: EAVE SECTION
SCALE 1" = 1'-0"



6/S1 PLAN: FOUNDATION @ EQUIPMENT FENCE
SCALE 1/8" = 1'-0"



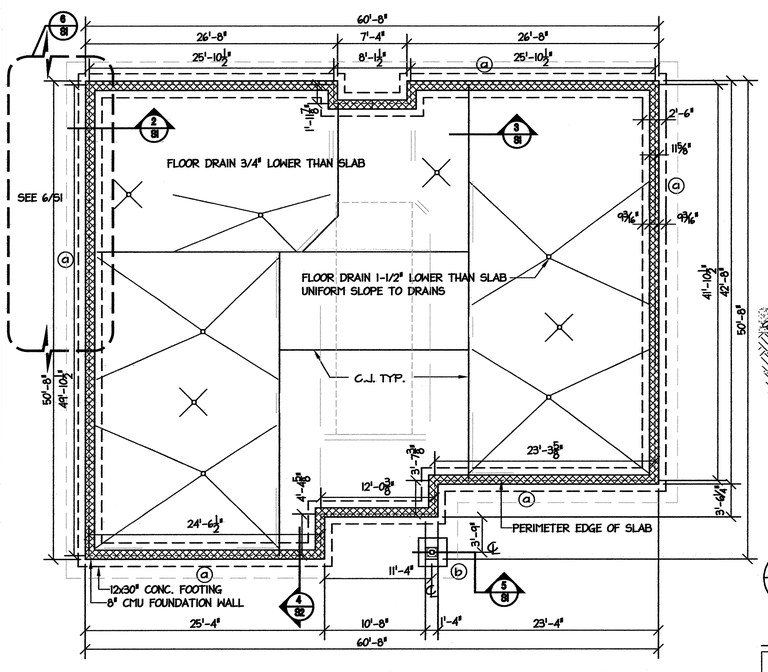
7/S1 ELEV: FENCE AROUND HVAC EQUIPMENT
SCALE 1/2" = 1'-0"



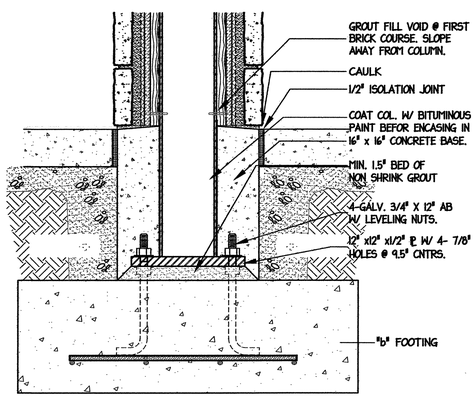
8/S1 DETAILS: BRACKET OPTIONS
SCALE nts

NOTES:

1. DESIGN SOIL BEARING CAPACITY = 2000 PSF (PRESUMPTIVE)
2. DESIGN ROOF LIVE LOAD = 20 PSF
   A. DESIGN SNOW LOAD = 15 PSF
3. DESIGN ROOF DEAD LOAD = 10 PSF (PLUS 3 PSF COLL.)
4. DESIGN WIND VELOCITY = 90 MPH, WIND EXPOSURE CATEGORY B
5. COMPRESSIVE STRENGTH OF CONCRETE, F'c, IN FLOOR SLAB SHALL BE MIN OF 3000 psi @ 28 DAYS.
6. DO NOT SCALE FROM DRAWINGS, USE GIVEN DIMENSIONS FOR LOCATIONS.
7. TOP OF FOOTING ELEVATION FOR ALL FOOTINGS OF BLDG IS 98'-0" UNLESS OTHERWISE NOTED,
8. CORRESPONDING MASONRY WALLS SHALL BE CENTERED ON CONTINUOUS FOOTINGS.
9. COMPRESSIVE STRENGTH OF CONCRETE, F'c, IN FOOTINGS SHALL BE 3000 psi @28 DAYS.
10. ALL REINFORCING STEEL SHALL BE GRADE 60.



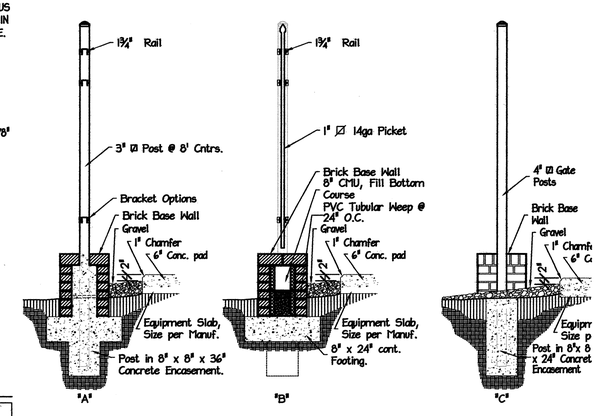
1/S1 FOUNDATION PLAN
SCALE: 1/8" = 1'- 0"



5/S1 DETAIL: COLUMN BEARING
SCALE 1 1/2" = 1'-0"

FOOTING SCHEDULE

MARK	SIZE	REINFORCING
ⓐ	2'-6" x 12" CONT'	3 -#5's CONT. W/ #4 TIES 18" O.C.
ⓑ	3'-0" x 3'-0"x 1'-0"	4 -#4's E.W.



9/S1 SECT: FOUNDATION @ EQUIPMENT FENCE
SCALE 1/2" = 1'-0"

PROJECT:
I-40 REST AREA
CATAWBA COUNTY — NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
RALEIGH, NORTH CAROLINA 27601
(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:
FOUNDATION PLAN & DETAILS

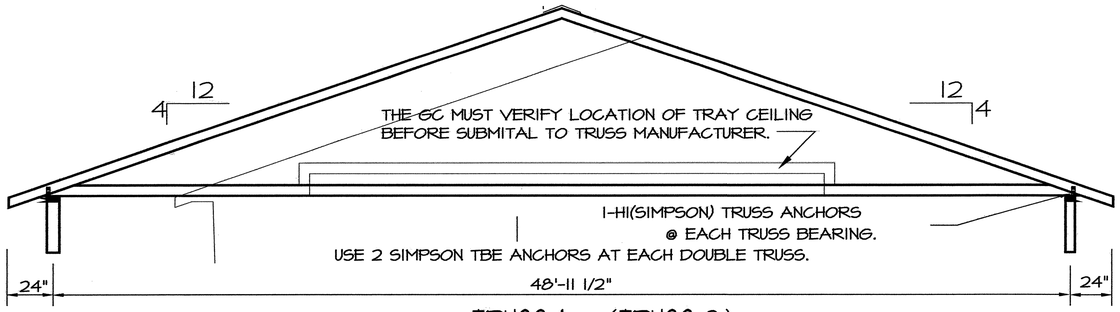
DRAWN BY: CLS CHECKED BY: W.E. RATTERREE ISSUE DATE: 27 OCT 2009

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 18394 10-30-09 ENGINEER WILLIAM RATTERREE

TIP. PROJ. NO.	WBS. NO.	COTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

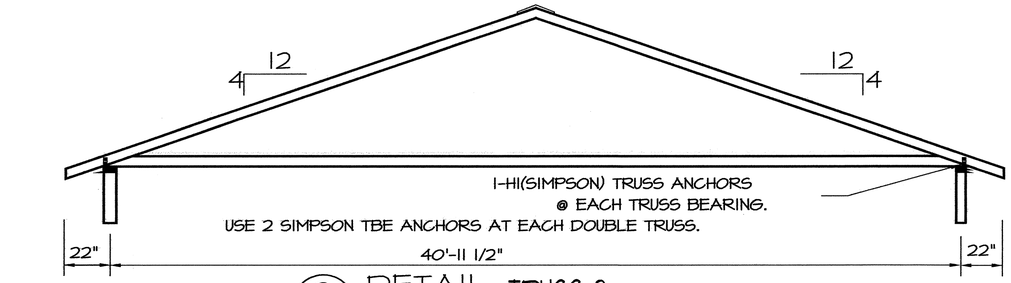
NO.	REVISIONS/SUBMISSIONS	DATE

SHEET NO. S1 OF 2



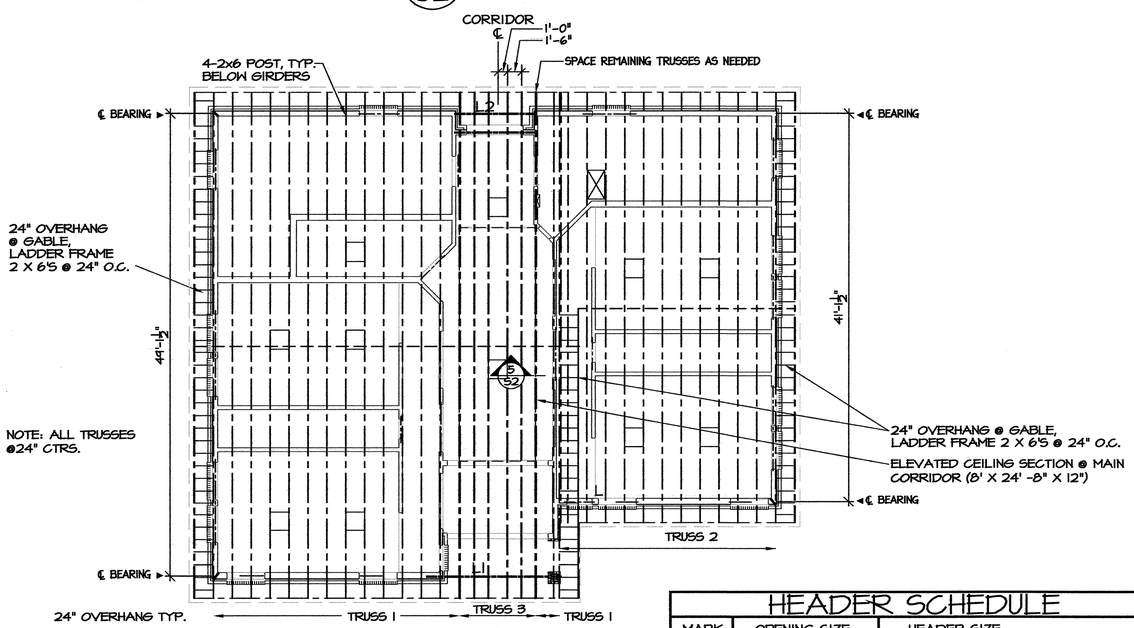
TRUSS 1 (TRUSS 3)

TRUSS 3 IS IDENTICAL TO TRUSS 1, EXCEPT FOR THE 12" HIGH CENTER SECTION AS SHOWN.



2/S2 DETAIL: TRUSS 2

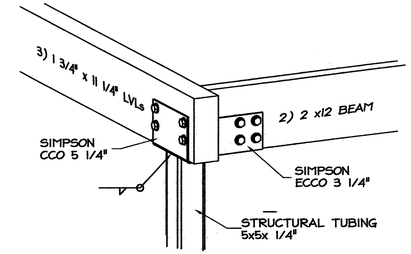
SCALE 1/4" = 1'-0"



1/S2 FRAMING PLAN

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

HEADER SCHEDULE		
MARK	OPENING SIZE	HEADER SIZE
L-1	8'-0" TO 12'-0"	3 LVL BEAMS 1 3/4" X 11 1/4"
L-2	6'-0" TO 8'-0"	3 2.0E ES LVL BEAMS 1 3/4" X 9 1/4"
L-3	2'-0" TO 6'-0"	3 2X8'S W/ 2 7/16" OSB SPACER

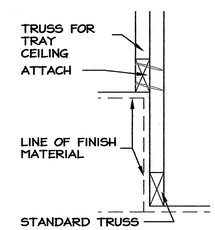


3/S2 UNION @ COLUMN

SCALE: NTS

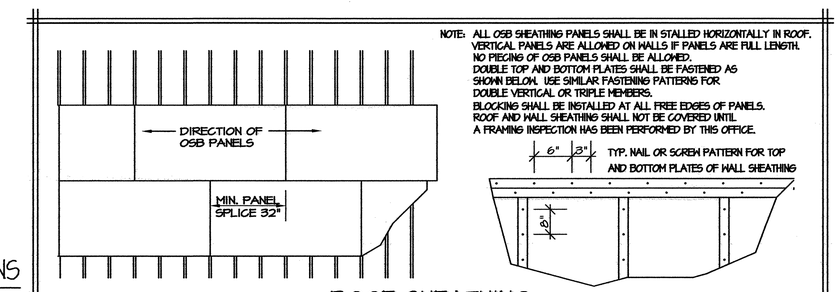
ROOF FRAMING NOTES:

1. ROOF TRUSS FABRICATOR SHALL FURNISH SHOP DRAWINGS, ENGINEERING DESIGN COMPUTATIONS, ALL CONNECTIONS AND DETAILS, ALL BRIDGING AND BRACING FOR TRUSSES AS SHOWN IN PROFILE, ALL BEARING THE SEAL OF A REGISTERED ENGINEER SHOWING REGISTRATION IN THE STATE OF NORTH CAROLINA. THE PLACEMENT OF THE ENGINEER'S SEAL WITH THE ENGINEER'S SIGNATURE AND DATE SEALED AND SIGNED CERTIFIES THAT THE WORK HAS BEEN DESIGNED AND CHECKED BY THE ENGINEER AND THAT THE DESIGN AND WORK MEETS THE SPECIFIED REQUIREMENTS AND THE NORTH CAROLINA STATE BUILDING CODE. TRUSS LATERAL X-BRACING, TOP & BOTTOM CHORD LATERAL BRACING SHALL BE AS DEFINED IN HIB-41 FOR PITCHED ROOFS. BRACING SHALL BE SYP #2 (MIN. 2x4's) AND NAILED AT EACH CONNECTION W/ A MINIMUM OF 2-16d GALVANIZED NAILS.
2. DESIGN LOADS
   ROOF TRUSSES:
   DEAD LOAD = 10 PSF
   LIVE LOAD = 20 PSF
   SNOW LOAD = 15 PSF
   COLLATERAL DEAD LOAD 3 PSF (DUCTWORK, & ELEC.)
   USE DEAD LOAD AND COLLATERAL DL TO CALCULATE NET UPLIFT
3. PROVIDE THE REQUIRED CAMBER IN EACH ROOF TRUSS SO THAT THE D.L. AND L.L. DEFLECTION SHALL BE THE SAME IN ALL PLANES. CAMBER FOR LONG TERM DEAD LOAD DEFLECTION.
4. ALL WOOD MEMBERS USED SHALL BEAR THE IDENTIFICATION GRADE AS CALLED FOR IN THE FABRICATOR'S ENGINEERED AND SEALED DESIGN COMPUTATIONS.
5. LUMBER SHALL NOT BE LESS THAN GRADE NO. 2 SOUTHERN YELLOW PINE OR AS ALLOWED BY FABRICATOR'S ENGINEERED AND SEALED DESIGN COMPUTATIONS.
6. LUMBER SHALL BE GRADED AND MARKED BY SOUTHERN PINE INSPECTION BUREAU.
7. THE ERECTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE BRACING TO RESIST ALL FORCES ENCOUNTERED DURING ERECTION.
8. THE ERECTOR SHALL INSTALL ALL BRIDGING AND BRACING AS CALLED FOR BY THE SEALED SHOP DRAWINGS AND COMPUTATIONS.
9. ANCHORS FOR ROOF TRUSSES SHALL BE AS MANUFACTURED BY SIMPSON STRONG TIE CO., OR APPROVED EQUAL. (HARLON METAL PRODUCTS INC., OR HUGHES, OR USP)



5/S2 TRUSS CONNECTIONS

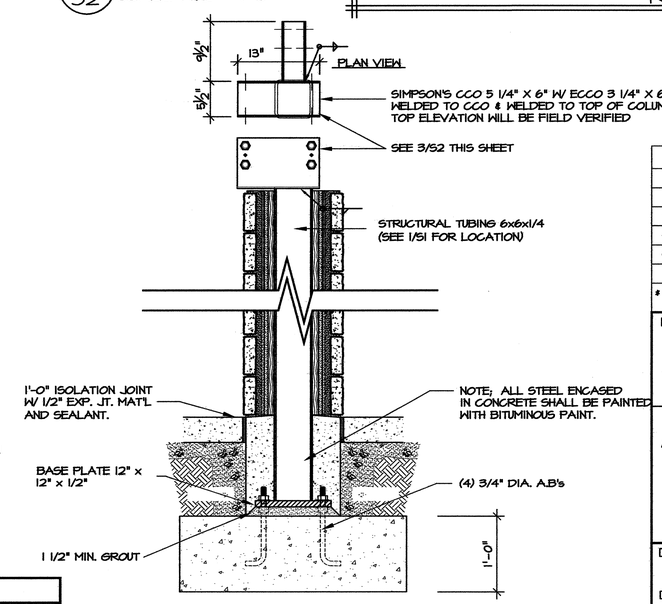
SCALE: 1 1/2" = 1'-0"



NOTE: ALL OSB SHEATHING PANELS SHALL BE IN STALLED HORIZONTALLY IN ROOF. VERTICAL PANELS ARE ALLOWED ON WALLS IF PANELS ARE FULL LENGTH. NO PIECING OF OSB PANELS SHALL BE ALLOWED. DOUBLE TOP AND BOTTOM PLATES SHALL BE FASTENED AS SHOWN BELOW. USE SIMILAR FASTENING PATTERNS FOR DOUBLE VERTICAL OR TRIPLE MEMBERS. BLOCKING SHALL BE INSTALLED AT ALL FREE EDGES OF PANELS. ROOF AND WALL SHEATHING SHALL NOT BE COVERED UNTIL A FRAMING INSPECTION HAS BEEN PERFORMED BY THIS OFFICE.

ROOF SHEATHING

NOTE: SPLICES OF TOP AND BOTTOM PLATES SHALL BE SPACED A MAX. OF 3' APART. ALL FRAMING MEMBERS SHALL BE FASTENED PER THE REQUIRED FASTENING SCHEDULE, TABLE 2306.1 OF THE NCSBC IN ADDITION TO THE FASTENERS SHOWN ON THESE DETAILS OR CALLED OUT IN THE SPECS.



4/S2 DETAIL: EXT. AIRLOCK COLUMN

SCALE 1" = 1'-0"

MASONRY WALL LINTEL SCHEDULE			
OPENINGS	LINTEL		BEARING
0'-0" TO 1'-4"	1 P-3/8 x 3 1/2	(GALV'D.) *	8"
1'-4" TO 4'-0"	1 L-3 1/2 x 3 1/2 x 5/16	(GALV'D.) *	8"
4'-0" TO 6'-8"	1 L-4 x 3 1/2 x 5/16	(GALV'D.) *	8"
6'-8" TO 8'-0"	1 L-5 x 3 1/2 x 5/16	(GALV'D.) *	8"
SEE INFO BELOW FOR CAVITY WALL CONSTRUCTION			

* PER 4" OF WALL THICKNESS
NOTES:

PROJECT:

I-40 REST AREA

CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:

FACILITIES DESIGN

GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
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(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:

FRAMING PLAN & DETAILS

DRAWN BY: CLS CHECKED BY: W.E. RATTERREE ISSUE DATE: 27 OCT 2009

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 16394 ENGINEER WILLIAM RATTERREE 10-30-09

TIP. PROJ. NO.	WBS. NO.	COTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

NO.	REVISIONS/SUBMISSIONS	DATE

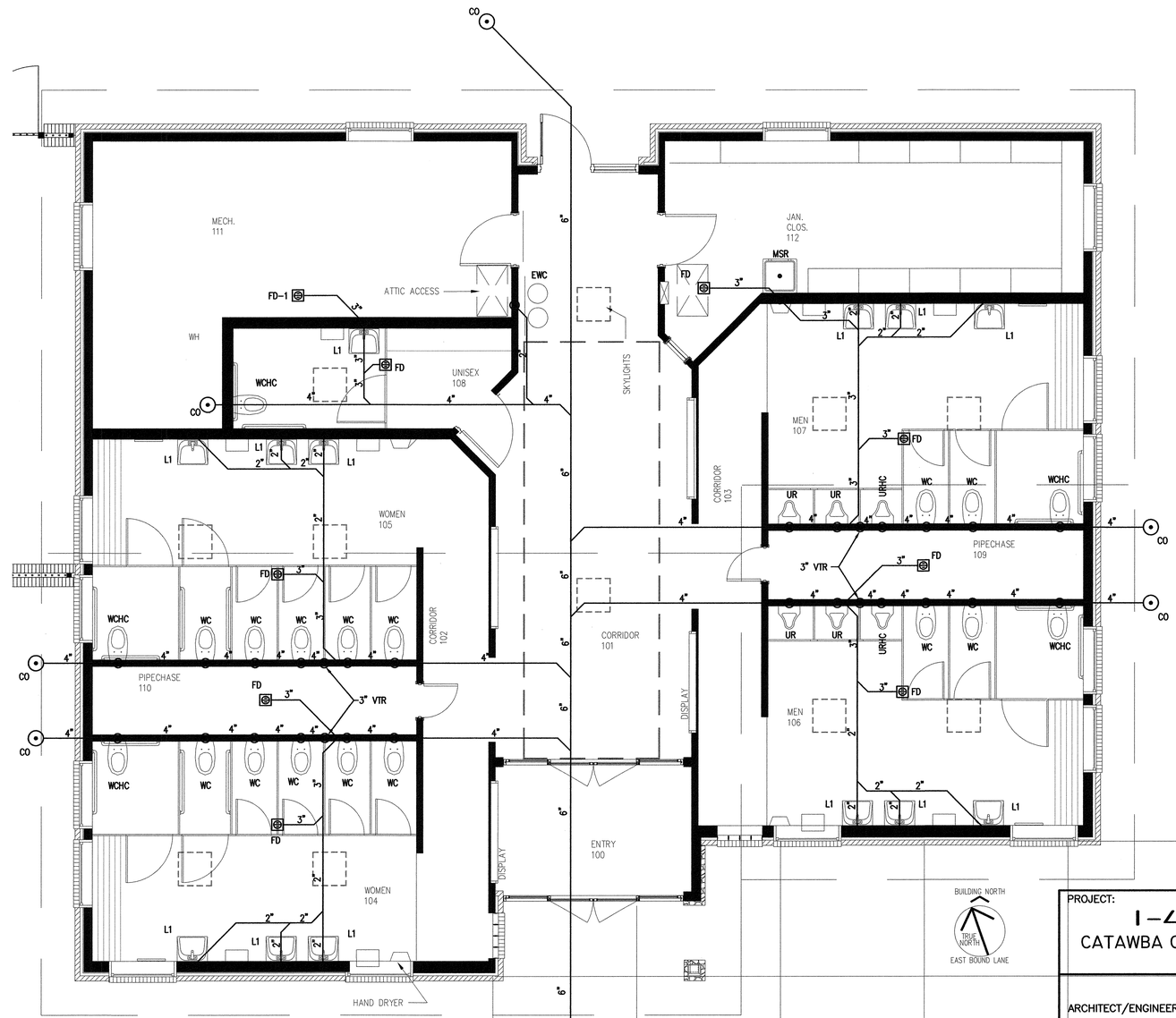
SHEET NO. **S2** OF 2

PLUMBING FIXTURE SCHEDULE:

SYMBOL	DESCRIPTION
WC	WATER CLOSET (See note 1 below) AMERICAN STANDARD "AFWALL EL 1.6" # 3353.160, SIPHON JET, ELONGATED BOWL, VITROUS CHINA, AND 1 1/2" BACK SPUD. PROVIDE OPEN FRONT AMERICAN STANDARD SEAT, AND CONCEALED WALL MOUNTED SENSOR W/ MANUAL OVERRIDE, USE HYDROTECH H-8000C-C FLUSH VALVE AND TRANSFORMER(S).
WCHC	WATER CLOSET (HANDICAPPED) (See note 1 below) AMERICAN STANDARD "AFWALL EL 1.6" # 3353.160, SIPHON JET, ELONGATED BOWL, VITROUS CHINA, AND 1 1/2" BACK SPUD. PROVIDE OPEN FRONT AMERICAN STANDARD SEAT, AND CONCEALED WALL MOUNTED SENSOR W/ MANUAL OVERRIDE, USE HYDROTECH H-8000C-C FLUSH VALVE AND TRANSFORMER(S).
UR	URINAL (See note 1 below) AMERICAN STANDARD "WASHBROOK FLOWISE" .5 GPF, #6515.005 SIPHON JET, VITREOUS CHINA, 3/4" CONCEALED URNIAL BACK SPUD, AND WALL SENSOR W/ MANUAL OVERRIDE HYDROTECH H-8000C-D1T-WB FLUSH VALVE AND TRANSFORMER(S)
URHC	URINAL (HANDICAPPED) (See note 1 below) AMERICAN STANDARD "WASHBROOK FLOWISE" .5 GPF, #6515.005 SIPHON JET, VITREOUS CHINA, 3/4" CONCEALED URNIAL BACK SPUD, AND WALL SENSOR W/ MANUAL OVERRIDE HYDROTECH H-8000C-D1T-WB FLUSH VALVE AND TRANSFORMER(S)
L1	LAVATORY (HANDICAPPED WALL HUNG) (See note 1 below) AMERICAN STANDARD "LUCERNE" # 0355.012 WHITE WITH CONCEALED ARM CARRIER. FURNISH WITH AUTOMATIC SENSOR FAUCET (HYDROTECH HB-2603C (BATTERY) & TRANSFORMER(S)), TEMPERED VALVE FOR 90°F AND DRAIN ASSEMBLY. WALL OR CHASE LAVATORIES IN ALL BATHROOMS SHALL BE EQUIPED W/WIRING ENCASED IN METAL FLEX CONDUIT TO AVOID VANDALISM.
MSR	MOP SINK (See note 1 below) ACORN NO. TDF36-SSC, 36"X36"X12" TERRAZZO SERVICE BASIN WITH 6" DROP FRONT AND STAINLESS STEEL CAPS ON CURBS. FAUCET: ACORN MODEL KFC CHROME PLATED SERVICE FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK AND 3/4" HOSE THREAD ON SPOUT. HOSE & HOSE BRACKET: ACORN MODEL KH36 LONG FLEXIBLE 5/8" RUBBER HOSE, CLOTH REINFORCED.
EWC	ELECTRIC WATER COOLER (See note 5 below) HALSEY TAYLOR MODEL OVL-II SEBP DUAL SST DRINKING FOUNTAIN, BARRIER FREE WALL HUNG, WITH HALSEY TAYLOR MODEL SJ8-Q REMOTE CHILLER, 120V/1PH/60HZ, 325 W, FLA=3.5
RP	CIRCULATING PUMP (See note 7 below) BELL & GOSSET, SERIES 100 IN-LINE HOT WATER PUMP, 1/12 HP, 115 VAC, FLA=1.75 1 Ph., 3/4" CONN., WITH A MINIMUM OF 13 GPM AND 8' TDH. PUMP TO BE ALL BRONZE CONSTRUCTION, COORDINATE WITH ELEC. CONTRACTOR FOR POWER FEED. PROVIDE DISCONNECT SWITCH.
WS	WATER CLOSET SUPPORTS (See note 8 below) SMITH MODEL# 0209Y, HORIZONTAL NO HUB.
US	URINAL SUPPORTS (See note 8 below) SMITH MODEL# 0637
MTR	WATER METER (OR EQUAL) (See note 6 below) NEPTUNE, 3", MODEL TRU/FLO (OR EQUAL). METER INDICATION SHALL BE WITH BOTTOM OF GAUGE TOWARD FLOOR.
HB	HOSE BIBB (See note 4 below) WOODFORD MODEL 67B, 3/4" LOCKABLE BOX HOSE BIBB W/ VACUUM BREAKER. KEY OPERATION.
EWH	ELECTRIC WATER HEATER (See note 2 below) STATE WATER # ES650DORS, 50 GALLONS, 4500W, 3/4" INLET AND OUTLET, ELECTRIC, 240V, 1 PHASE, MODEL# ETC-2X EXPANSION TANK.
EWH-1	ELECTRIC WATER HEATER (See note 2 below) STATE WATER # ES630DORS, 30 GALLONS, 4500W, 3/4" INLET AND OUTLET, ELECTRIC, 240V, 1 PHASE, MODEL# ETC-2X EXPANSION TANK.
FD	FLOOR DRAIN (See note 3 below) ZURN ZN-415-P. PROVIDE WITH DEEP SEAL P-TRAP, AND TYPE "B" STRAINER.
FD-1	FLOOR DRAIN (See note 3 below) ZURN ZN-415-P. PROVIDE WITH DEEP SEAL P-TRAP, AND TYPE "I" STRAINER.
AFH	ANTI-FREEZE HOSEBIBB (See note 4 below) ZURN Z-1315-5, 3/4" NON FREEZE WALL HYDRANT WITH VACUUM BREAKER. INCLUDE KEYED OPERATION.
TPV	TRAP PRIMER VALVE (See note 9 below) PPP INC. MODEL# PR-500, 1/2" INLET, 1/2" OUTLET

APPROVED EQUALS:

1. Or equal by Kohler, Zurn orToto
   Toilet and Flush Valve:
   Kohler Kingston #K-4329.
   Toto #TET2GN31 Flush Valve.
   Zurn #Z5617 With Zurn #ZEMS6252PEV Flush Valve.
   Urinal and Flush Valve:
   Zurn #Z5799 With Integrated Flush Valve.
   Toto #UT447EV With Toto #TEU2LN11 Flush Valve.
   Mop Sink: With Accessories
   Florestone Mop Sink #92 With Speakman #MR-371 Faucet, Hose and Mop Hanger.
   Crane Mop Sink #TSB-3002 with #830-AA Faucet, #832-AA Hose, #1453-BB Strainer, #889-CC Mop Hanger, #E-77-AA Bumper Guard, and Stainless Steel Splash Guard.
   Lavatory with Faucet (L1)
   Kohler Greenwich #K-2032 With American Standard Battery Sensor Faucet #6055.205.
   Eljer Murry II #051-0244 With Zurn Battery Sensor Faucet #Z6915.
2. Electric Water Heater (EWH)
   AO Smith #DEL-50.
   Amtrol ST-5-C Expansion Tank.
   Bradford White #LD-50S3-3.
   AO Smith PMC-2 Expansion Tank.
2. Electric Water Heater (EWH-1)
   Rheem #81VP10S.
   Amtrol ST-5-C Expansion Tank.
   Bradford White #M-1-10U6SS.
   AO Smith PMC-2 Expansion Tank.
3. Floor Drains
   Josam #30000A.
   Josam #30000E1.
   Jay R. Smith #2005-A.
   Jay R. Smith #2005-F37.
4. Hose Bibbs and Anti Freeze Hose Bibbs
   Jay R. Smith #5509QT.
   Watts #HY-330.
   Watts HY-725.
   Jay R. Smith #5509QT.
5. Electric Water Cooler
   Halsey Taylor #OVL-II SEBPFR Fountain With Halsey Taylor #SJ8-Q Remote Chiller.
   Elkay #EDFP217C Fountain With Elkay #ECH8 Remote Chiller.
6. Water Meter
   Park Environmental Equip. 2" Turbine.
   Hersey Horizon 2" Turbine.
7. Circulating Pump
   Taco Model #110.
   Armstrong Model #S-25.
8. Water Closet Supports
   Zurn #1204
   Josam STD. 4" No Hub, 2" Vent.
8. Urinal Supports
   Zurn #1221.
   Josam #17550.
9. Trap Primer Valve
   Watts #A200.
   Josam #88300.



1 / P-1 PLUMBING PLAN- WASTE EAST BOUND

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

CONNECT TO EXISTING MANHOLE, SEE SITE UTILITIES DRAWING FOR EXACT LOCATION.

PLUMBING LOAD SUMMARY
WASTE FIXTURE UNITS = 165
WATER FIXTURE UNITS = 257
TOTAL DEMAND G.P.M. = 102

WASTE AND VENT LEGEND:

- COLD WATER PIPE
- HOT WATER PIPE
- NEW HOT RETURN
- BALL VALVE
- HOSE BIBB
- WATER HYDRANT
- NEW VENT
- NEW WASTE
- C.O. — CLEAN OUT-PROVIDE CONCRETE RING FOR EXTERIOR CLEANOUTS
- W.C.O. — WALL CLEAN OUT
- FLOOR DRAIN
- VTR — VENT THROUGH ROOF
- TPC — TRAP PRIMER CONNECTION
- CONNECT TO EXISTING
- KEY NOTE NUMBER

GENERAL NOTES - PLUMBING

1. PREPLAN ALL WORK PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY PART OF THE WORK DESCRIBED BY THIS DRAWING.
2. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS WITH EXISTING FIELD CONDITIONS OR THE WORK OF OTHER TRADES.
3. RESOLVE ALL CONFLICTS PRIOR TO INCURRING ANY MATERIAL OR LABOR EXPENSES.
4. COMPLY WITH THE MANUFACTURER'S TECHNICAL INSTRUCTIONS WHEN INSTALLING PLUMBING FIXTURES, MATERIALS, AND DEVICES.
5. LOCATE FIXTURES AND EQUIPMENT GENERALLY AS SHOWN ON THE PLANS; HOWEVER, COORDINATE LOCATIONS WITH ACTUAL FIELD CONDITIONS TO PRESERVE ALL CODE-REQUIRED AND MANUFACTURER - REQUESTED SERVICE CLEARANCES.
6. COORDINATE ROUTING OF ALL PIPING WITH BUILDING STRUCTURE AND WITH THE WORK OF OTHER TRADES. OFFSET VENT PIPING AROUND BEAMS AND JOISTS AS NECESSARY.
7. ALL HANDICAP FIXTURES AND INSTALLATION OF HANDICAP FIXTURES SHALL CONFORM TO ADA REQUIREMENTS.
8. AT EXTERIOR WALL, INSTALL WATER PIPING ON HEATED SIDE OF WALL INSULATION.
9. PROVIDE WATER HAMMER ARRESTORS AT THE END OF EACH COLD AND HOT WATER BRANCH RISER. SIZE ARRESTOR APPROPRIATELY.
10. PROVIDE CONCRETE RING FOR ALL EXTERIOR CLEAN-OUTS.
11. THESE PLANS REPRESENT THE PLUMBING DESIGN FOR CATAWBA COUNTY EAST BOUND ONLY. THE SANITARY SEWER FOR THE WEST BOUND BUILDING WILL FLOW IN THE OPPOSITE DIRECTION.
12. PLUMBING CONTRACTOR TO ESTABLISH INVERTS AND COORDINATE WASTE LINES WITH BUILDING FOOTINGS BEFORE BEGINNING THIS PROJECT.

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
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RALEIGH, NORTH CAROLINA 27601
(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:

DRAWN BY: M. WILLIAMS CHECKED BY: J. HOBBY ISSUE DATE: 27 OCT 09

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Fax 919-678-6109

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 7911 ENGINEER JOEL M. HOBBY 10/27/09

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

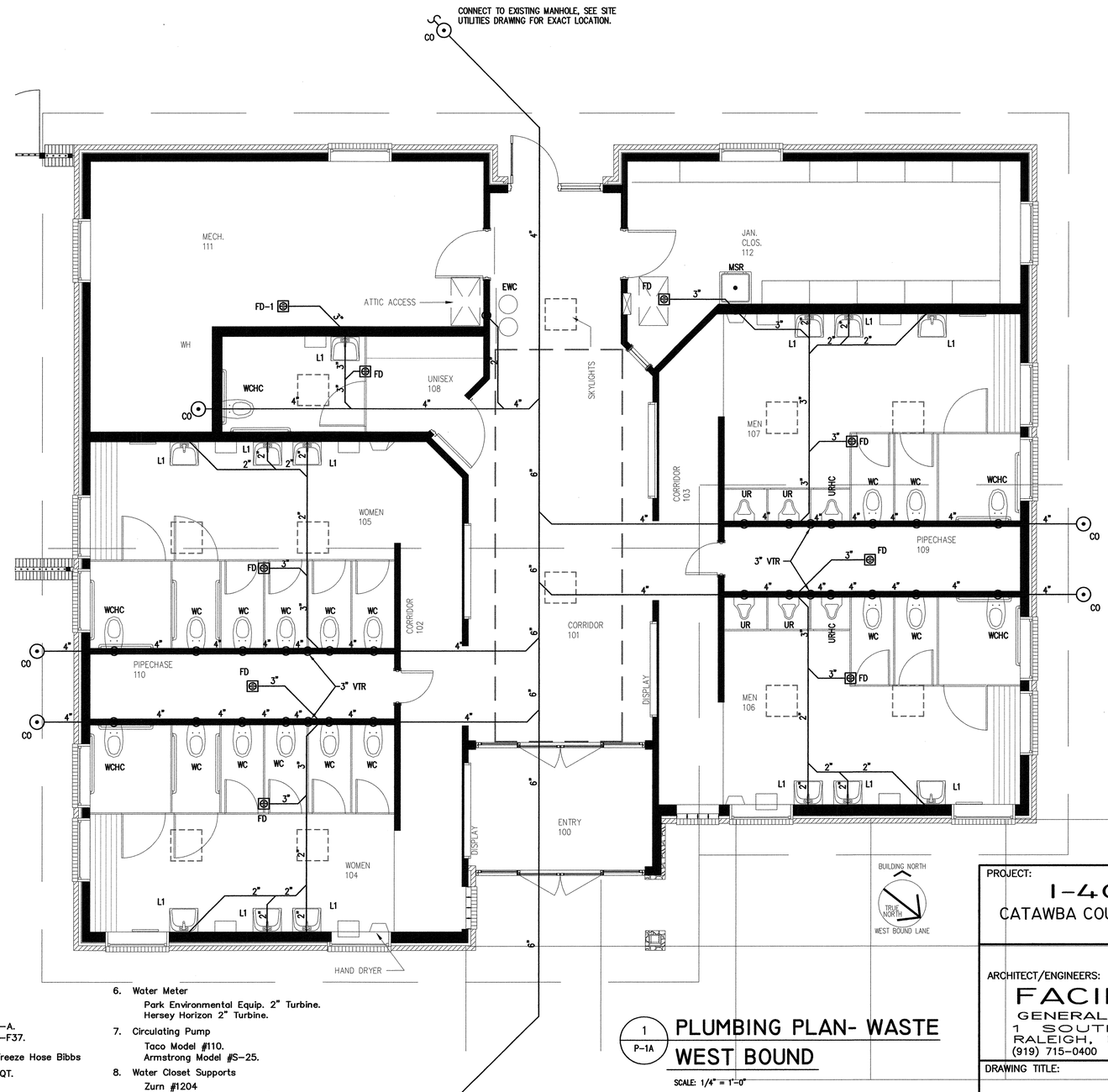
SHEET NO. PI OF 6

PLUMBING FIXTURE SCHEDULE:

SYMBOL	DESCRIPTION
WC	WATER CLOSET (See note 1 below) AMERICAN STANDARD "AFWALL EL 1.6" # 3353.160, SIPHON JET, ELONGATED BOWL, VITROUS CHINA, AND 1 1/2" BACK SPUD. PROVIDE OPEN FRONT AMERICAN STANDARD SEAT, AND CONCEALED WALL MOUNTED SENSOR W/ MANUAL OVERRIDE, USE HYDROTECH H-8000C-C FLUSH VALVE AND TRANSFORMER(S).
WCHC	WATER CLOSET (HANDICAPPED) (See note 1 below) AMERICAN STANDARD "AFWALL EL 1.6" # 3353.160, SIPHON JET, ELONGATED BOWL, VITROUS CHINA, AND 1 1/2" BACK SPUD. PROVIDE OPEN FRONT AMERICAN STANDARD SEAT, AND CONCEALED WALL MOUNTED SENSOR W/ MANUAL OVERRIDE, USE HYDROTECH H-8000C-C FLUSH VALVE AND TRANSFORMER(S).
UR	URINAL (See note 1 below) AMERICAN STANDARD "WASHBROOK FLOWISE" .5 GPF, #6515.005 SIPHON JET, VITREOUS CHINA, 3/4" CONCEALED URNIAL BACK SPUD, AND WALL SENSOR W/ MANUAL OVERRIDE HYDROTECH H-8000C-D1T-WB FLUSH VALVE AND TRANSFORMER(S)
URHC	URINAL (HANDICAPPED) (See note 1 below) AMERICAN STANDARD "WASHBROOK FLOWISE" .5 GPF, #6515.005 SIPHON JET, VITREOUS CHINA, 3/4" CONCEALED URNIAL BACK SPUD, AND WALL SENSOR W/ MANUAL OVERRIDE HYDROTECH H-8000C-D1T-WB FLUSH VALVE AND TRANSFORMER(S)
L1	LAVATORY (HANDICAPPED WALL HUNG) (See note 1 below) AMERICAN STANDARD "LUCERNE" # 0355.012 WHITE WITH CONCEALED ARM CARRIER. FURNISH WITH AUTOMATIC SENSOR FAUCET (HYDROTECH HB-2603C (BATTERY) & TRANSFORMER(S)), TEMPERED VALVE FOR 90°F AND DRAIN ASSEMBLY. WALL OR CHASE LAVATORIES IN ALL BATHROOMS SHALL BE EQUIPED W/WIRING ENCASED IN METAL FLEX CONDUIT TO AVOID VANDALISM.
MSR	MOP SINK (See note 1 below) ACORN NO. TDF36-SSC, 36"X36"X12" TERRAZZO SERVICE BASIN WITH 6" DROP FRONT AND STAINLESS STEEL CAPS ON CURBS. FAUCET: ACORN MODEL KFC CHROME PLATED SERVICE FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK AND 3/4" HOSE THREAD ON SPOUT. HOSE & HOSE BRACKET: ACORN MODEL KH36 LONG FLEXIBLE 5/8" RUBBER HOSE, CLOTH REINFORCED.
EWC	ELECTRIC WATER COOLER (See note 5 below) HALSEY TAYLOR MODEL OVL-II SEBP DUAL SST DRINKING FOUNTAIN, BARRIER FREE WALL HUNG, WITH HALSEY TAYLOR MODEL SJ8-Q REMOTE CHILLER, 120V/1PH/60HZ, 325 W, FLA=3.5
RP	CIRCULATING PUMP (See note 7 below) BELL & GOSSET, SERIES 100 IN-LINE HOT WATER PUMP, 1/12 HP, 115 VAC, FLA=1.75 1 Ph., 3/4" CONN., WITH A MINIMUM OF 13 GPM AND 8' TDH. PUMP TO BE ALL BRONZE CONSTRUCTION, COORDINATE WITH ELEC. CONTRACTOR FOR POWER FEED. PROVIDE DISCONNECT SWITCH.
WS	WATER CLOSET SUPPORTS (See note 8 below) SMITH MODEL# 0209Y, HORIZONTAL NO HUB.
US	URINAL SUPPORTS (See note 8 below) SMITH MODEL# 0637
MTR	WATER METER (OR EQUAL) (See note 6 below) NEPTUNE, 3", MODEL TRU/FLO (OR EQUAL). METER INDICATION SHALL BE WITH BOTTOM OF GAUGE TOWARD FLOOR.
HB	HOSE BIBB (See note 4 below) WOODFORD MODEL 67B, 3/4" LOCKABLE BOX HOSE BIBB W/ VACUUM BREAKER. KEY OPERATION.
EWH	ELECTRIC WATER HEATER (See note 2 below) STATE WATER # ES650DORS, 50 GALLONS, 4500W, 3/4" INLET AND OUTLET, ELECTRIC, 240V, 1 PHASE, MODEL# ETC-2X EXPANSION TANK.
EWH-1	ELECTRIC WATER HEATER (See note 2 below) STATE WATER # ES630DORS, 30 GALLONS, 4500W, 3/4" INLET AND OUTLET, ELECTRIC, 240V, 1 PHASE, MODEL# ETC-2X EXPANSION TANK.
FD	FLOOR DRAIN (See note 3 below) ZURN ZN-415-P. PROVIDE WITH DEEP SEAL P-TRAP, AND TYPE "B" STRAINER.
FD-1	FLOOR DRAIN (See note 3 below) ZURN ZN-415-P. PROVIDE WITH DEEP SEAL P-TRAP, AND TYPE "I" STRAINER.
AFH	ANTI-FREEZE HOSEBIBB (See note 4 below) ZURN Z-1315-5, 3/4" NON FREEZE WALL HYDRANT WITH VACUUM BREAKER. INCLUDE KEYED OPERATION.
TPV	TRAP PRIMER VALVE (See note 9 below) PPP INC. MODEL# PR-500, 1/2" INLET, 1/2" OUTLET

APPROVED EQUALS:

1. Or equal by Kohler, Zurn orToto
   Toilet and Flush Valve:
   Kohler Kingston #K-4329.
   Toto #TET2GN31 Flush Valve.
   Zurn #Z5617 With Zurn #ZEMS6252PEV Flush Valve.
   Urinal and Flush Valve:
   Zurn #Z5799 With Integrated Flush Valve.
   Toto #UT447EV With Toto #TEU2LN11 Flush Valve.
   Mop Sink: With Accessories
   Florestone Mop Sink #92 With Speakman #MR-371 Faucet, Hose and Mop Hanger.
   Crane Mop Sink #TSB-3002 with #830-AA Faucet, #832-AA Hose, #1453-BB Strainer, #889-CC Mop Hanger, #E-77-AA Bumper Guard, and Stainless Steel Splash Guard.
   Lavatory with Faucet (L1)
   Kohler Greenwich #K-2032 With American Standard Battery Sensor Faucet #6055.205.
   Eljer Murry II #051-0244 With Zurn Battery Sensor Faucet #Z6915.
2. Electric Water Heater (EWH)
   AO Smith #DEL-50.
   Amtrol ST-5-C Expansion Tank.
   Bradford White #LD-50S3-3.
   AO Smith PMC-2 Expansion Tank.
2. Electric Water Heater (EWH-1)
   Rheem #81VP10S.
   Amtrol ST-5-C Expansion Tank.
   Bradford White #M-1-10U6SS.
   AO Smith PMC-2 Expansion Tank.
3. Floor Drains
   Josam #30000A.
   Josam #30000E1.
   Jay R. Smith #2005-A.
   Jay R. Smith #2005-F37.
4. Hose Bibbs and Anti Freeze Hose Bibbs
   Jay R. Smith #5509QT.
   Watts #HY-330.
   Watts HY-725.
   Jay R. Smith #5509QT.
5. Electric Water Cooler
   Halsey Taylor #OVL-II SEBPFR Fountain With Halsey Taylor #SJ8-Q Remote Chiller.
   Elkay #EDFP217C Fountain With Elkay #ECH8 Remote Chiller.
6. Water Meter
   Park Environmental Equip. 2" Turbine.
   Hersey Horizon 2" Turbine.
7. Circulating Pump
   Taco Model #110.
   Armstrong Model #S-25.
8. Water Closet Supports
   Zurn #1204
   Josam STD. 4" No Hub, 2" Vent.
8. Urinal Supports
   Zurn #1221.
   Josam #17550.
9. Trap Primer Valve
   Watts #A200.
   Josam #88300.



1 P-1A

PLUMBING PLAN- WASTE
WEST BOUND

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

PLUMBING LOAD SUMMARY
WASTE FIXTURE UNITS = 165
WATER FIXTURE UNITS = 257
TOTAL DEMAND G.P.M. = 102

WASTE AND VENT LEGEND:

- COLD WATER PIPE
- HOT WATER PIPE
- NEW HOT RETURN
- BALL VALVE
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PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
RALEIGH, NORTH CAROLINA 27601
(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:

DRAWN BY: M. WILLIAMS CHECKED BY: J. HOBBY ISSUE DATE: 27 OCT 09

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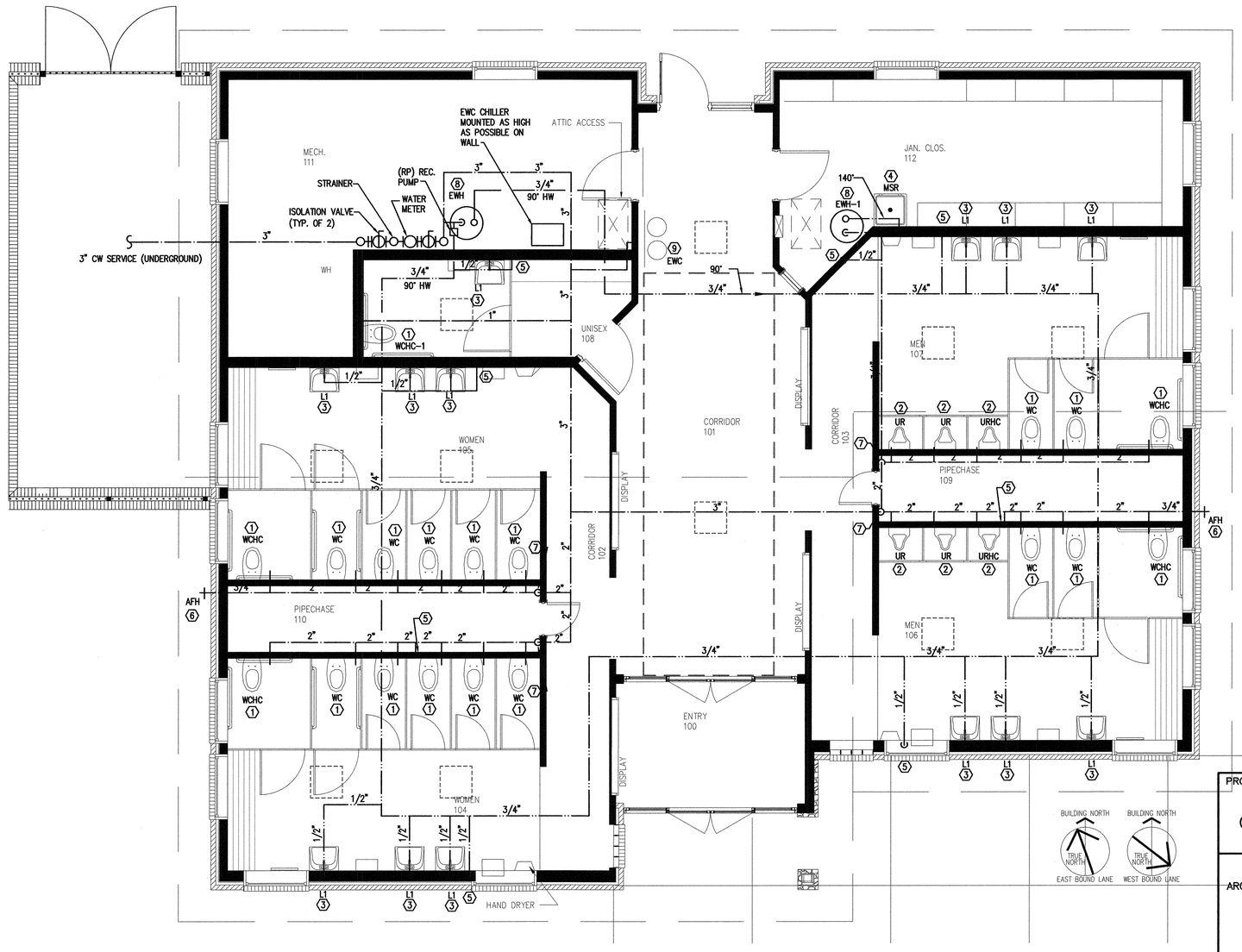
SEAL: NORTH CAROLINA PROFESSIONAL SEAL 7911 ENGINEER JAEL M. HOBBY 10/27/09

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.3.ST1	C202172	STM-040-2(146)117

SHEET NO. PIA OF 6

PLUMBING KEY NOTES - WATER

1. 1" CW TO FLUSH VALVE.
2. 3/4" CW TO FLUSH VALVE.
3. 1/2" H & CW TO SINK L1.
4. 3/4" H & CW TO MOP SINK (HW 140 DEG.)
5. 1/2" CW TO HOSE BIB.
6. 3/4" CW TO NON FREEZE HYDRANT
7. 2" CW DN, VALVE IN VERTICAL DROP.
8. 3/4" CW DN. TO EWH, 3/4" HW LOOP.
9. 1/2" CW DN. TO ELECTRICAL WATER COOLER.



1 / P-2 PLUMBING PLAN- WATER EAST AND WEST BOUND

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

PROJECT:

I-40 REST AREA

CATAWBA COUNTY NORTH CAROLINA

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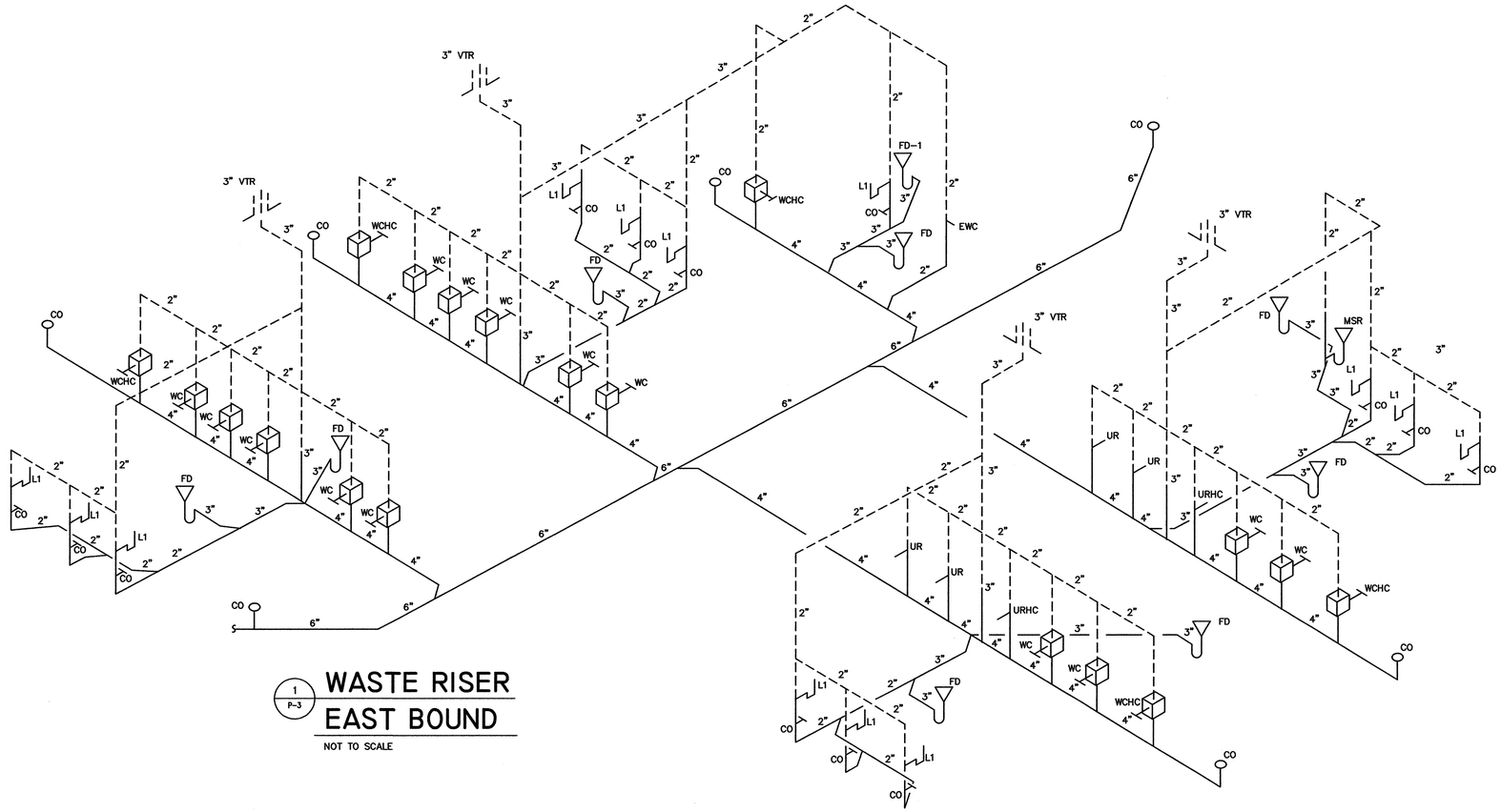
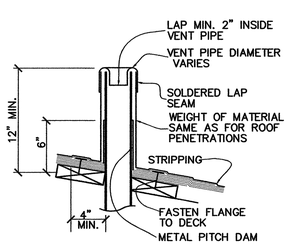
SHEET NO. P2 OF 6



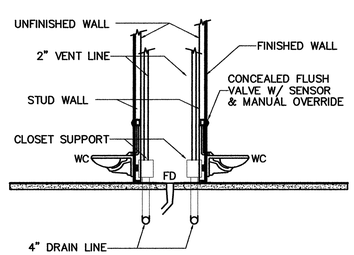
1 P-3 **WASTE RISER EAST BOUND**

NOT TO SCALE



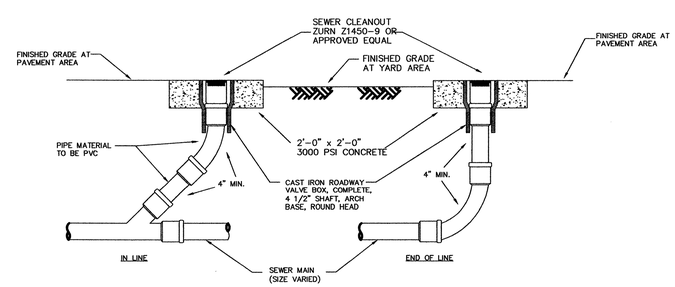
2 P-3 **VTR DETAIL**

SCALE: NTS



3 P-3 **WATER CLOSET DETAIL**

SCALE: NTS



4 P-3 **GRAVITY SEWER CLEANOUT**

NOT TO SCALE

PROJECT:

I-40 REST AREA

CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:

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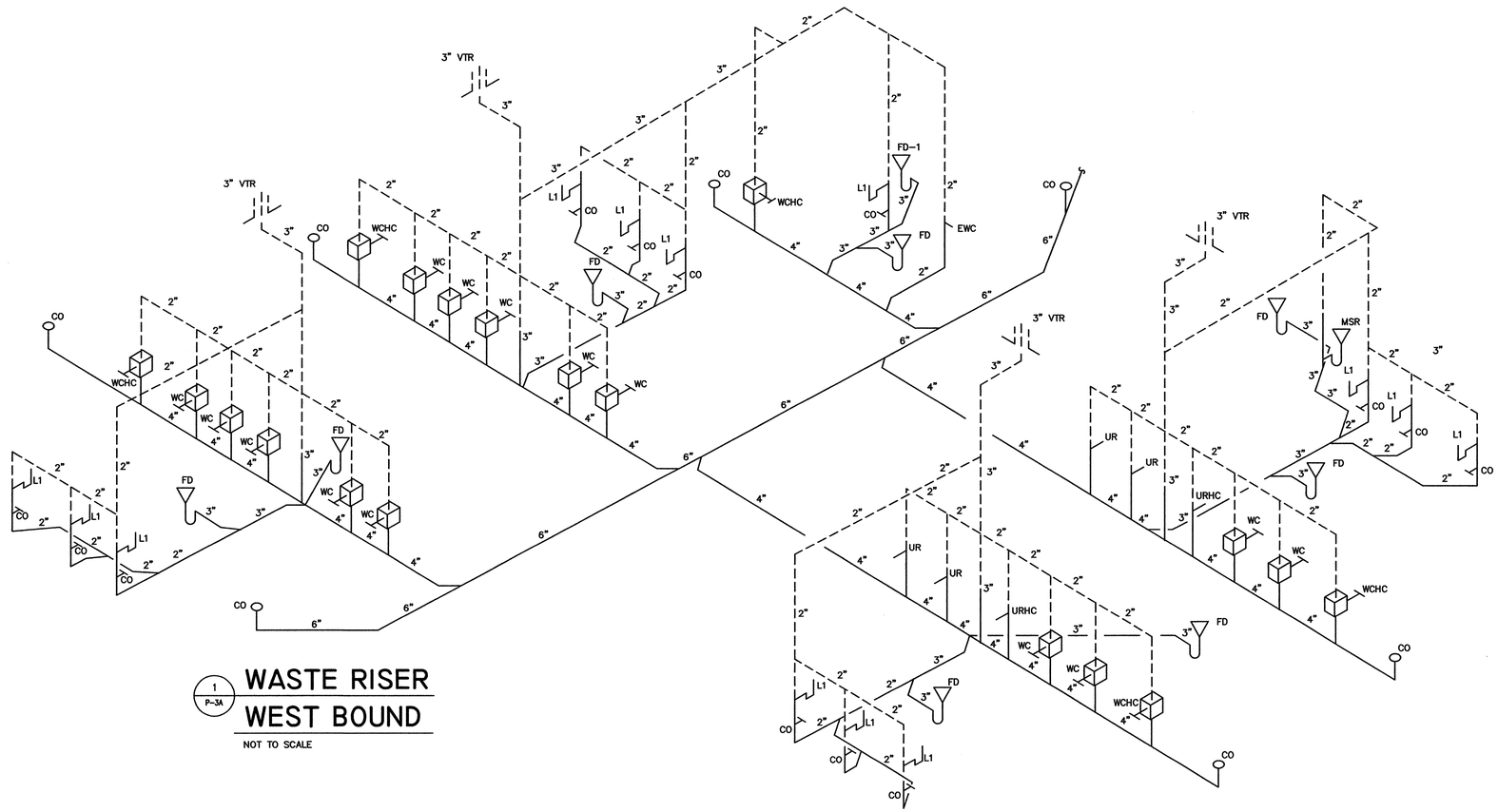
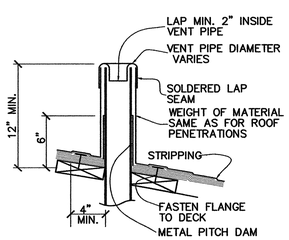
SHEET NO. P3 OF 6



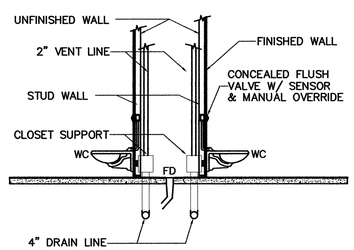
1 P-3A **WASTE RISER WEST BOUND**

NOT TO SCALE



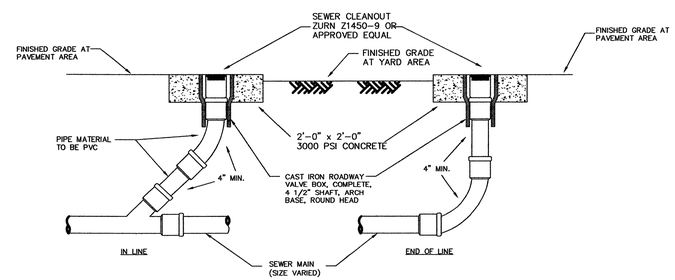
2 P-3A **VTR DETAIL**

SCALE: NTS



3 P-3A **WATER CLOSET DETAIL**

SCALE: NTS



4 P-3A **GRAVITY SEWER CLEANOUT**

NOT TO SCALE

PROJECT:

I-40 REST AREA

CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:

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GENERAL SERVICES DIVISION, NCDOT
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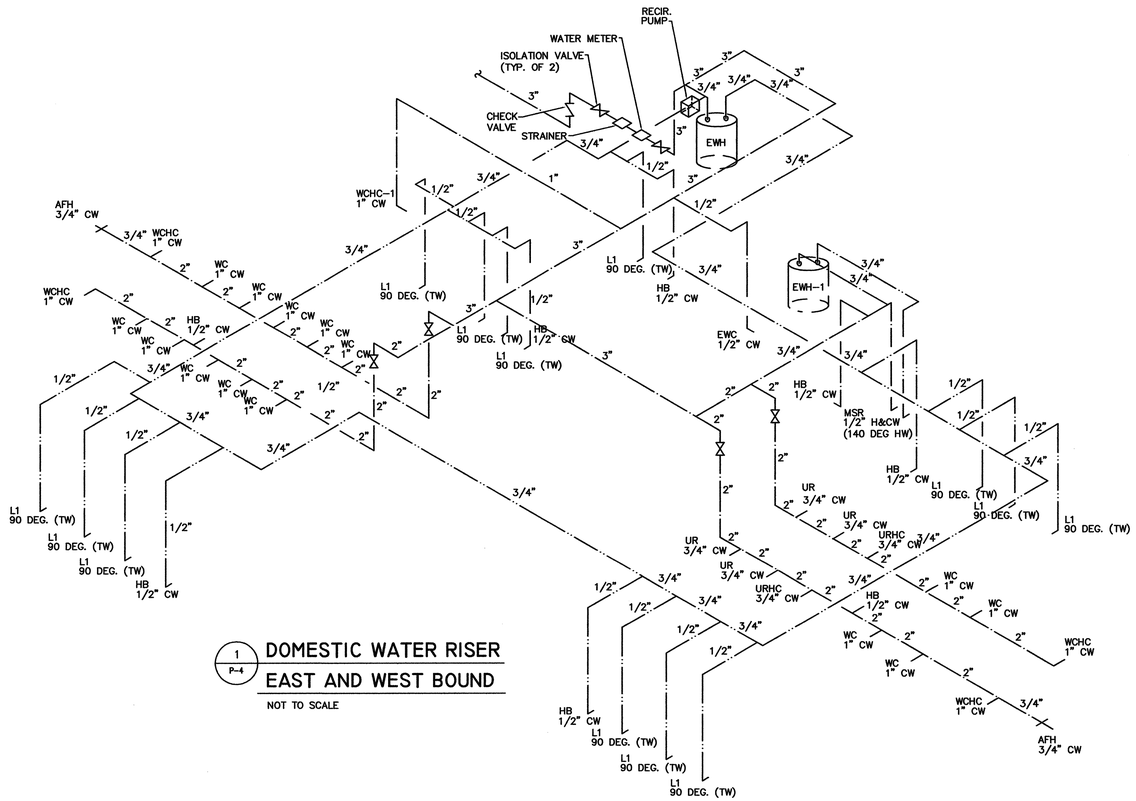
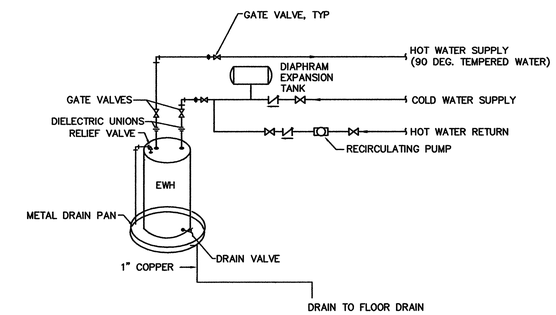
SHEET NO. **P3A** OF 6



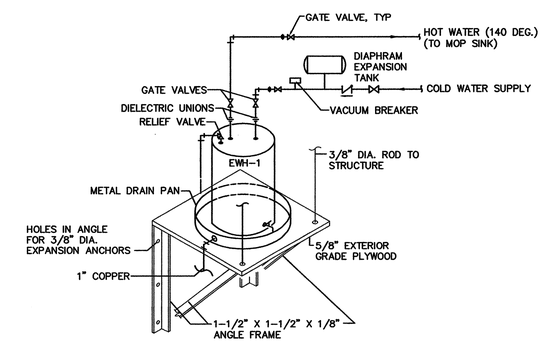
1 P-4 DOMESTIC WATER RISER EAST AND WEST BOUND

NOT TO SCALE



2 P-4 DOMESTIC WATER HEATER PIPING SCHEMATIC

NOT TO SCALE



3 P-4 DOMESTIC WATER HEATER PIPING SCHEMATIC

NOT TO SCALE

PROJECT:

I-40 REST AREA

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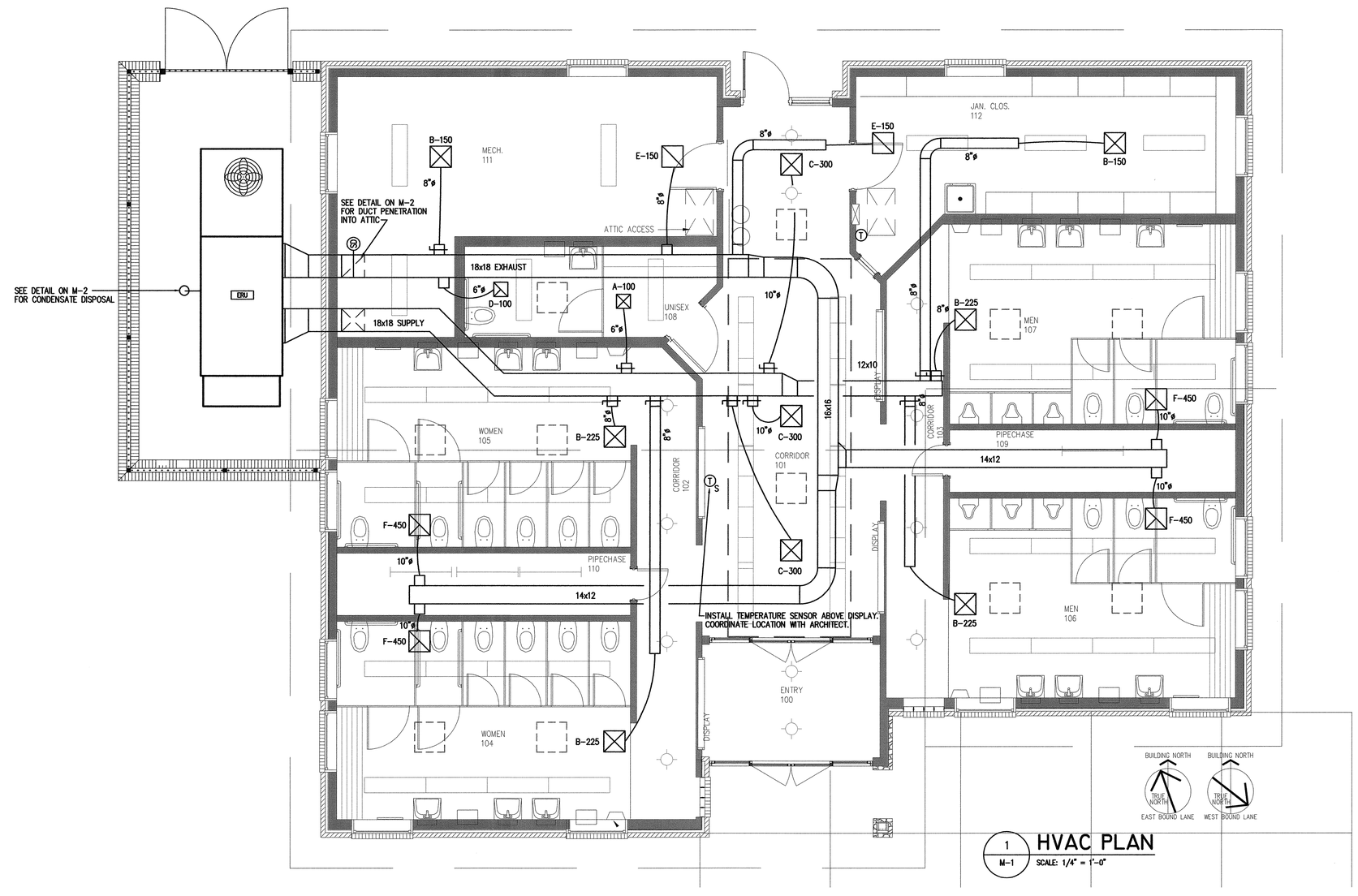
SHEET NO. P4 OF 6



1 M-1 **HVAC PLAN**

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

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2006 EDITION OF THE STATE CODE AND ALL LOCAL AND OTHER APPLICABLE CODES.
2. ANY INSPECTION SHALL BE COORDINATED WITH THE DESIGNER BY THE MECHANICAL CONTRACTOR (MC) WITH A 48 HRS NOTICE.
3. ALL WORK SHALL BE PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN. THE MC SHALL COORDINATE ALL OF HIS WORK WITH THE GENERAL CONTRACTOR (GC) AND OTHER TRADES.
4. THE LOCATION OF ALL DUCT, PIPING AND EQUIPMENT SHALL BE ADJUSTED TO ACCOMMODATE ANTICIPATED OR ENCOUNTERED INTERFERENCES.
5. THESE PLANS ARE DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS. FOR DIMENSIONS REFER TO THE ARCHITECTURAL PLANS.
6. THE MC SHALL BE RESPONSIBLE FOR ALL ELECTRICAL STARTERS INTERLOCKS, CONTROL WIRING CONDUIT AND POWER WIRING FROM DISCONNECTS TO HIS EQUIPMENT, USING A LICENSED ELECTRICIAN.
7. THE MC SHALL USE DUCT COLLARS FOR PROTECTION OF THE OPENING IN ACCORDANCE WITH STATE AND LOCAL CODES IN ALL LOCATIONS WHERE PENETRATIONS OF WALLS AND CEILING OCCUR.
8. INSTALL FLEXIBLE CONNECTORS ON SUPPLY AND RETURN DUCTWORK AT ALL UNITS. ALL MECHANICAL EQUIPMENT SHALL OPERATE FREE OF OBJECTIONAL NOISE AND VIBRATION.
9. PROVIDE RADIUSED ELBOWS IN SUPPLY DUCTS AT ALL ELBOWS AND SPLITTER DAMPERS. PROVIDE BALANCING DAMPERS IN ALL DUCTS WHERE SHOWN OR REQUIRED FOR SYSTEM BALANCING.
10. DUCT DIMENSIONS ARE SHOWN INSIDE CLEAR. ALLOWANCES SHALL BE MADE FOR DUCT WRAP. DUCT WRAP SHALL BE IN ACCORDANCE WITH ENERGY CODE WITH FOIL BACK FIBERGLAS INSULATION.
11. ALL THERMOSTATS, WIRING AND CONDUIT ARE TO BE FURNISHED BY THE MC. MOUNT ALL THERMOSTATS 48" ABOVE THE FINISHED FLOOR. TEMPERATURE SENSOR LOCATIONS BY ARCHITECT.
12. THE MC SHALL KEEP THE PREMISES CLEAR OF DEBRIS FROM HIS WORK DURING CONSTRUCTION AND LEAVE THE AREA AND BUILDING CLEAN AT THE COMPLETION OF HIS WORK. HE SHALL ALSO LEAVE CLEAN ALL EXPOSED EQUIPMENT IN HIS CONTRACT.
13. COORDINATE DIFFUSER AND CEILING EXHAUST GRILLE LOCATIONS WITH LIGHTS, GRID AND SKYLIGHTS. COORDINATE MOUNTING FRAME WITH CEILING TYPE.
14. THE M.C. SHALL COORDINATE WITH AND PROVIDE EQUIPMENT SPEC. SHEETS TO THE GENERAL AND ELECTRICAL CONTRACTORS FOR APPROVAL PRIOR TO CONSTRUCTION.
15. THE M.C. IS RESPONSIBLE FOR PATCHING, SEALING, SLEEVING AND FIRE CAULKING ALL PENETRATIONS WHERE HIS EQUIPMENT IS INSTALLED TO MEET CODE. SEAL REQUIRED PENETRATIONS WITH 3M FIRE/SMOKE STOP MATERIAL OR EQUAL PRODUCT. SEE ARCH. PLANS FOR WALL/CEILING RATINGS.
16. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL BE 10'-0". PROVIDE SHEET METAL ELBOWS AT ALL 90 DEGREE BENDS.
17. MECHANICAL CONTRACTOR SHALL DRILL ALL OPENINGS REQUIRED FOR DUCT/PIPING. COORDINATE ALL LOCATIONS WITH GENERAL CONTRACTOR. MECHANICAL CONTRACTOR TO PROVIDE DIMENSIONAL LAYOUT WITHIN SEVEN DAYS OF START OF PROJECT. MECHANICAL CONTRACTOR SHALL PROVIDE U.L. RATED SLEEVES OR SEALS AT ALL PENETRATIONS REQUIRED BY STATE AND LOCAL CODES.

LEGEND - DUCTWORK/ACCESSORIES

⊠	SUPPLY DIFFUSER
⊘	RETURN GRILLE
⊠	CEILING MOUNTED EXHAUST FAN OR GRILLE AS NOTED
⊏	LOCKING MANUAL BALANCING DAMPER
Ⓣ	THERMOSTAT WITH LOCKING COVER
$Ⓣ_S$	WALL MOUNTED TEMPERATURE SENSOR
(SD)—	DUCT MOUNTED SMOKE DETECTOR

PROJECT:

I-40 REST AREA

CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:

FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
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DRAWN BY: R. KEIL CHECKED BY: R. KEIL ISSUE DATE: 27 OCT 09

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Fax 919-678-6109

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 16343 ENGINEER RICHARD R. KEIL 10/27/09

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

SHEET NO. **MI** OF 2

OUTDOOR MECHANICAL INSULATION

Quality Assurance:

Products offered by Owens-Corning, Knauf, Armstrong, Pittsburgh-Corning, and Dow-Corning are acceptable subject to complying with specifications.

Submit manufacturers data sheets and installation instructions for all insulation, adhesives, coatings, cements, tapes and finish materials for approval before installation.

All insulation, adhesives, coatings, sealers shall have a flame spread of 25 or less and smoke development of 50 or less as tested by ASTM E-84 and further must meet the requirements of NFPA 90-A where applicable. (Exception is allowed for smoke developed of 100 on foamed plastic 3/4" thick and greater and for polyisocyanurate).

All insulation materials shall be delivered and stored in manufacturers container and kept free from dirt, water, chemical and mechanical damage.

Insulation shall not be applied until all pressure testing has been completed, inspected and released for insulation application.

Surfaces to be insulated shall be clean and dry.

All insulation joints shall be butted firmly together and all jackets and tapes shall be smoothly and securely installed.

Products:

ASTM C612-83 Class I & II
ASTM C921-79 Type I Non-metallic

2" fiberglass, nominal 6 lb. density board, K Factor .23 maximum at 75 degree F mean with factory applied FSK jacket, for temperatures 0 degree F to 450 degree F.

Approved products: Owens-Corning 705 Fiberglass Board

Insulation Finish:

Grey Hypalon vapor barrier mastic with 10 x 10 or 20 x 10 white glass or nylon cloth reinforcing membrane to develop 30 mil dry film thickness. Provide aluminum jacket sealed watertight at joints.

Approved products: Foster Monolar 60-39

Execution:

Installation:

Secure insulation to duct with welded or adhered clips and washers on 12" centers. If insulation thickness will not allow standing seams to be covered with 1/2" insulation, install expanded rib metal lath over seams for insulation, support. Depress washers so pins can be cut flush with surface. Seal washers and pins with watertight finish. All joints and breaks in the vapor barrier shall be sealed with FSK tape.

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT METHOD OF COMPLIANCE:

PRESCRIPTIVE ☒ ENERGY COST BUDGET ☐

THERMAL ZONE	8
EXTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	18° F
SUMMER DRY BULB	93° F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	68 F
SUMMER DRY BULB	75F
RELATIVE HUMIDITY	50%
BUILDING HEATING LOAD	42.4 MBH
BUILDING COOLING LOAD	5.6 TONS
MECHANICAL SPACE CONDITIONING SYSTEM	
UNITARY	
ERU	
DESCRIPTION OF UNIT	PACKAGED UNIT WITH ENERGY RECOVERY
HEATING EFFICIENCY	–
COOLING EFFICIENCY	EER = 15.7
HEAT OUTPUT OF UNIT	68.3 MBH
COOLING OUTPUT OF UNIT	105
LIST EQUIPMENT EFFICIENCIES	
EFFICIENCIES ARE LISTED ON EQUIPMENT SCHEDULES	
EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS)	
MOTORS USED IN THIS PROJECT ARE INCLUDED IN THE EFFICIENCY RATING OF THE UNITS	

DESIGNER STATEMENT:

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE THERMAL ENVELOPE REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE, VOLUME X-ENERGY.

SIGNED: Richard Keil

NAME: RICHARD KEIL, PE

TITLE MECHANICAL ENGINEER

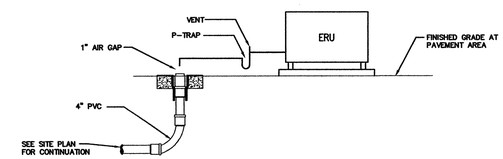
PACKAGED ENERGY RECOVERY UNIT SCHEDULE

DESIGNATION	MANUF.	MODEL NO.	FAN DATA		COOLING CAPACITY					HEATING CAPACITY				ELECTRICAL DATA		
			CFM	ESP	TOTAL MBH	SENS. MBH	EAT (°F) DB/WB	LAT (°F) DB/WB	AMBIENT DB/WB	EAT	LAT	KW	STAGES	VOLTAGE	MCA	MOCP
ERU	SEE NOTE # 5		2200	0.5	105	61.6	81/68	53/52	95/78	18°	86°	20	2	230/1ø	135	150

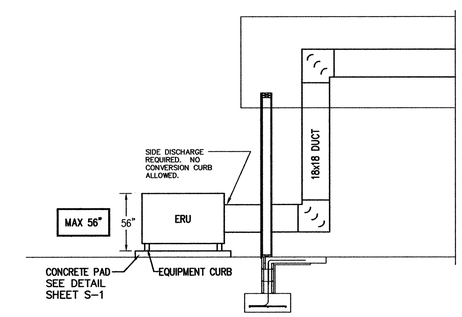
REMARKS:
1. PROVIDE NON-PROGRAMMABLE AUTO CHANGEOVER DIGITAL THERMOSTAT.
2. PROVIDE SINGLE POINT ELECTRICAL CONNECTION FROM MANUFACTURER IF AVAILABLE.
3. PROVIDE RETURN DUCT MOUNTED SMOKE DETECTOR WIRED FOR UNIT SHUTDOWN.
4. CABINET COLOR BY ARCHITECT. COORDINATE WITH EQUIPMENT VENDOR.
5. AAON, ADDISON AND GREENHECK ARE ACCEPTED EQUALS

AIR DISTRIBUTION SCHEDULE

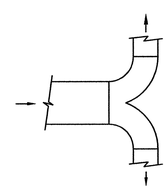
DESIGNATION	MANUFACTURER – MODEL NO.	TYPE	PANEL SIZE	NECK SIZE	MAX CFM	MAX NC	REMARKS
A	PRICE – ASCD CARNES – SFAB METALAIRE – 5800 AL	CEILING SUPPLY	12 x 12	6"ø	120	25	GYP. CEILING
B	PRICE – ASCD CARNES – SFAB METALAIRE – 5800 AL	CEILING SUPPLY	24 x 24	8"ø	250	25	GYP. CEILING
C	PRICE – ASCD CARNES – SFAB METALAIRE – 5800 AL	CEILING SUPPLY	24 x 24	10"ø	400	25	GYP. CEILING
D	PRICE – PDDR CARNES – SPR8224 METALAIR – 7300 R	CEILING EXHAUST	12 x 12	6"ø	120	25	GYP. CEILING
E	PRICE – PDDR CARNES – SPR8224 METALAIR – 7300 R	CEILING RETURN	16 x 16	8"ø	200	25	GYP. CEILING
F	PRICE – PDDR CARNES – SPR8224 METALAIR – 7300 R	CEILING EXHAUST	20 x 20	10"ø	450	25	GYP. CEILING



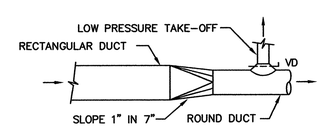
CONDENSATE DISPOSAL DETAIL
SCALE: NONE



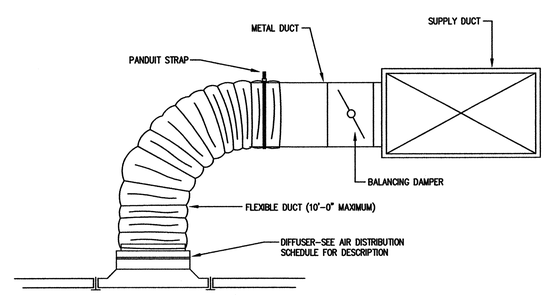
EQUIPMENT/DUCT DETAIL
SCALE: NONE



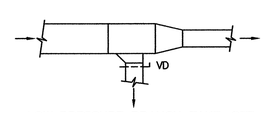
LOW PRESSURE TEE



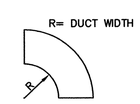
RECTANGULAR TO ROUND TRANSITION



DIFFUSER DETAIL
NO SCALE



LOW PRESSURE BRANCH TAKE-OFF



FULL RADIUS ELBOW

LOW PRESSURE DUCT ELBOWS

DUCT CONSTRUCTION DETAILS
SCALE: NONE

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
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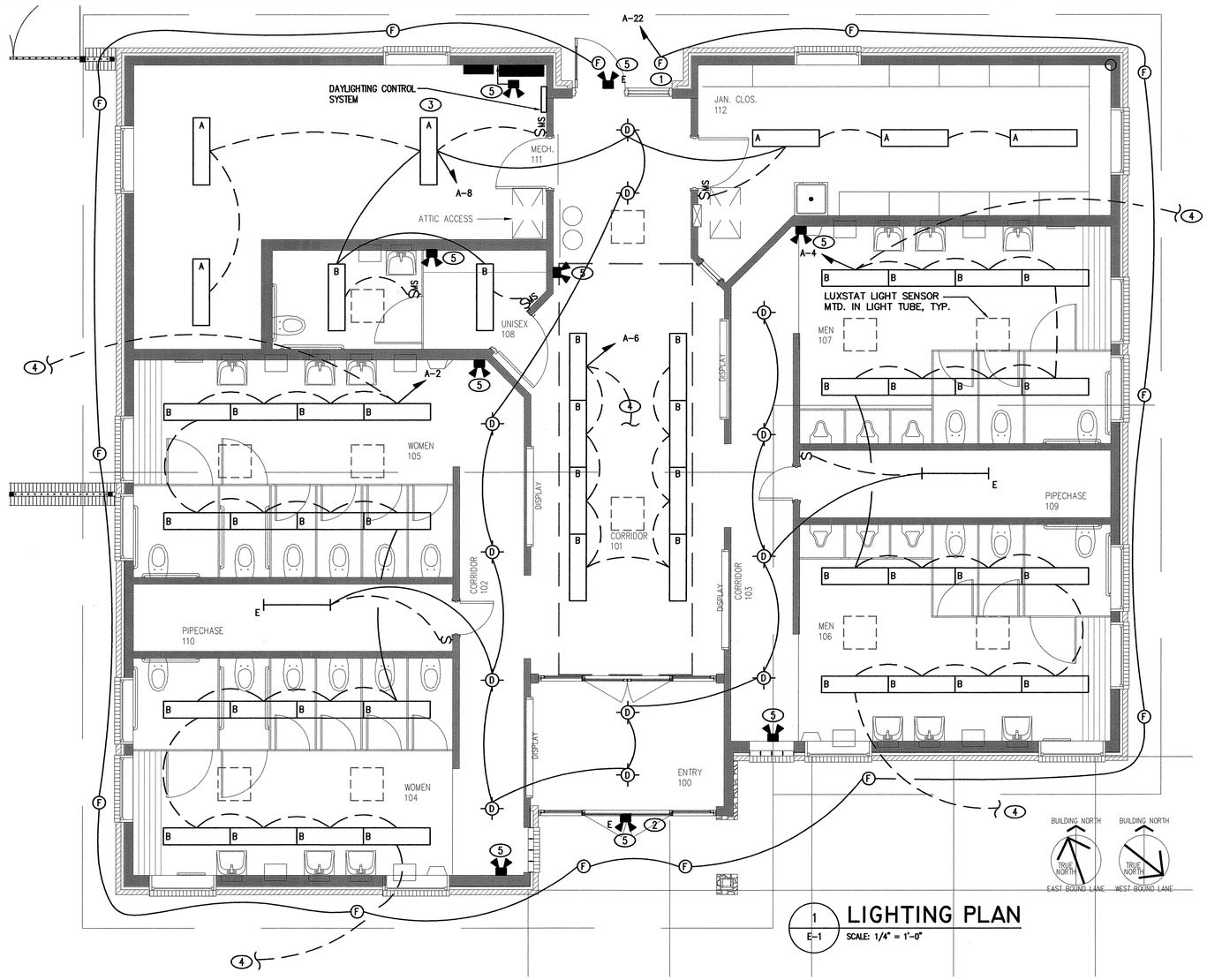
SHEET NO.
M2
OF 2

ELECTRICAL GENERAL NOTES

1. WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
2. MATERIALS AND EQUIPMENT SHALL BE NEW AND LISTED BY A TESTING AGENCY APPROVED BY THE AUTHORITY HAVING JURISDICTION, WHERE SUCH LISTING EXISTS.
3. 20 AMP, 120 VOLT CIRCUITS LONGER THAN 100 FEET IN TOTAL CONDUIT LENGTH SHALL BE #10 AWG MINIMUM.
4. CONDUCTORS ARE SIZED PER THE COPPER, 75° CELSIUS TABLES IN THE NEC.
5. CONDUITS ARE SIZED PER THE THWN/THHN INSULATION TABLES IN THE NEC.
6. INSTALL CIRCUIT BREAKERS AND FUSES ON ALL EQUIPMENT BASED ON THE ACTUAL NAMEPLATE DATA ON THE EQUIPMENT OR ON THE NEC REQUIREMENTS IF THERE IS NO NAMEPLATE DATA. FUSES SHALL BE TIME-DELAY, DUAL-ELEMENT TYPE, CLASS RK-5, UON.
7. INSTALL A NEC SIZED GROUND WIRE IN ALL RACEWAYS, UNLESS OTHERWISE NOTED. GROUNDING CONDUCTORS ARE NOT REQUIRED IN TELEDATA CONDUITS.
8. INDICATE CIRCUITS IN PANELS, SERVING EMERGENCY AND EXIT LIGHTS.
9. REVIEW ARCHITECTURAL DRAWINGS AND ELEVATIONS TO LOCATE RECEPTACLES, SWITCHES, & FIRE ALARM DEVICES, MUST COMPLY WITH NEC & NFPA.
10. ITEMS USED AS SERVICE ENTRANCE EQUIPMENT SHALL BE LISTED AND LABELED FOR THAT PURPOSE.
11. BALLASTS SHALL HAVE A MINIMUM POWER FACTOR OF 0.90.
12. MINIMUM WIRE SIZE SHALL BE #12 AWG, UON.
13. EC SHALL REVIEW THE ELECTRICAL REQUIREMENTS FOR ALL EQUIPMENT PROVIDED BY OTHERS WITH RESPECT TO MINIMUM CIRCUIT AMPACITY, MAXIMUM OVERCURRENT PROTECTION, VOLTAGE, & PHASE PRIOR TO INSTALLING HIS WORK. ANY DISCREPANCIES WITH THE ELECTRICAL DESIGN SHALL BE COORDINATED WITH THE ELECTRICAL ENGINEER.
14. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE. PROVIDE NEMA 3R WHERE LOCATED OUTSIDE & WHERE OTHERWISE NOTED.
15. PROVIDE A MINIMUM OF 10% EXTRA FUSES FOR EACH SIZE & CLASS, WITH A MINIMUM OF AT LEAST ONE SET OF EACH.
16. PROVIDE HAND-OFF-AUTO SWITCHES FOR ALL LIGHTING CONTACTORS.
17. PROVIDE MAGNETIC TRACER RIBBON FOR ALL UNDER GROUND UTILITIES BURIED 12" BELOW FINISH GRADE.
18. RUN #6 CU GROUND TO PHONE/DATA FROM BUILDING SERVICE GROUNDING POINT. PROVIDE 8' OF CONDUCTOR AT TELEPHONE BOARD.
19. COORDINATE LOCATION OF SMOKE DETECTORS WITH THE MECHANICAL CONTRACTOR. POSITION ALL SMOKE DETECTORS MIN. 3 FT. FROM SUPPLY DIFFUSERS & RETURN GRILLES.
20. AIC RATINGS SHOWN ON THE PANEL SCHEDULES ARE BASED ON FULLY RATED PANELS & CIRCUIT BREAKERS.
21. WHERE PHOTOCELLS ARE SHOWN ON THE DRAWING, THE EC SHALL PROVIDE RELAYS AND/OR LIGHTING CONTACTORS AS REQUIRED. THE MAXIMUM WATTS SWITCHED DIRECTLY THROUGH A PHOTOCELL SHALL BE 2000 FOR INCANDESCENT FIXTURES AND 1000 FOR HID AND FLUORESCENT FIXTURES.



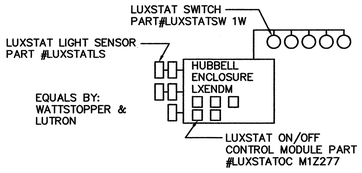
1 / E-1 LIGHTING PLAN
SCALE: 1/4" = 1'-0"

ELECTRICAL SYMBOL LEGEND

- EXIT LIGHT, BATTERY POWERED, UON. SHADED QUADRANTS INDICATE FACES. CONNECT TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCHING. ARROWS INDICATE DIRECTION ARROWS.
- EMERGENCY LIGHTING, WALL MTD. – BATTERY POWERED, UON. CONNECT TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCHING, UON.
- COMMUNICATIONS OUTLET. 16" AFF TO BOTTOM, UON.
- DISCONNECT SWITCH – HEAVY DUTY, FUSIBLE, UON.
- 30/3/1/250 CURRENT RATING/POLES/NEMA RATING/VOLTAGE
- PANELBOARD (PANEL)
- JB JUNCTION BOX
- DUPLEX RECEPTACLE, NEMA 5-20R. 16" AFF TO BOTTOM, UON.
- QUAD (DOUBLE DUPLEX) RECEPTACLE, NEMA 5-20R. 16" TO BOTTOM, UON.
- GF DUPLEX RECEPTACLE, NEMA 5-20R, GROUND FAULT CIRCUIT INTERRUPTER.
- WP DUPLEX RECEPTACLE, NEMA 5-20R, GROUND FAULT CIRCUIT INTERRUPTER WITH WEATHERPROOF COVER
- $ SINGLE-POLE WALL SWITCH. 48" TO TOP, UON.
- $M SINGLE-POLE MOTOR RATED SWITCH.
- $MS MOTION SENSOR SWITCH
- HOMERUN – 120V, 2-#12, 1-#12G, 3/4"C, UON
- HOMERUN – 208V, CIRCUIT WIRES AS INDICATED
- SWITCHED CIRCUIT
- UNSWITCHED CIRCUIT
- STROBE/HORN DEVICE. MINIMUM OF 80" AND MAXIMUM OF 96" AFF.
- ? DUCT SMOKE DETECTOR
- ? PHOTOELECTRIC SMOKE DETECTOR – PROVIDE LITHIUM BATTERIES-KIDDE MODEL 1235E EQUALS BY EST OR ADEMCO.

ELECTRICAL NOTES

1. SWITCH WITH PHOTO CELL.
2. WIRE EXTERIOR EMERGENCY FIXTURE TO EXTERIOR LIGHTING CIRCUIT, TYP.
3. COORDINATE FIXTURE LOCATIONS WITH EQUIPMENT PLACEMENT.
4. TO DAYLIGHTING CONTROLS.
5. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL PLANS.



DAYLIGHTING CONTROL SYSTEM

SCALE: NTS

FIXTURE SCHEDULE

MARK	DESCRIPTION	MFG. & CATALOG #	EQUALS	VOLTAGE	LAMP	REMARKS	WATTS
A	FLUOR. INDUSTRIAL SHADE	COLUMBIA CSR4-232-*-EU-CSRWG4	HOLOPHANE HSM SERIES LEGION 2600 SERIES	120 V	2-32W T8	WITH WIRE GUARD & REFLECTOR	64
B	1x4 SURFACE MOUNT	ALERA ME2T8 0/100 SM-LP	LITECONTROL LC94 SERIES DAYOLITE AD3510-DI SERIES	↓	2-32W T8	. .	64
C	NOT USED	. .	. .		.	. .	.
D	6" RECESSED CAN	PRESCOLITE CFR6126EB-ST372A1	KIRLIN RR80602 SERIES KURT VERSEN P632 SERIES		1-26W CF	. ①	26
E	4' STRIP .	COLUMBIA CS4-132-EU-CSWG4	PROGRESS P7267 SERIES LEGION 350 SERIES		2-32W T8	. . ①	64
F	8"- 2 LAMP RECESSED CAN W/LENS	PRESCOLITE CFR826UEB-ST492A	KIRLIN RR80907 KURT VERSEN P642 SERIES		2-26W CF	. .	52
H	NOT USED	. .	. .	↓	.	. .	.
NOTES: 1. FIXTURES & BALLAST MUST BE REMOVABLE FROM INACCESSIBLE CEILING.							
	EMERGENCY LIGHT .	EU-MR-3R .	LUNA SERIES NEMA SERIES	120 V		WHITE BODY .	
E	EMERGENCY LIGHT EXTERIOR	DUAL LITE PGZ-HTR	MULE MAKO-3-CW HIGH LITES PLURALUX SERIES	↓		. .	

LIGHT FIXTURE NOTES

① ALL COMPACT FLUORESCENT FIXTURES SHALL HAVE INTERCHANGEABLE 26 WATT LAMPS.

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
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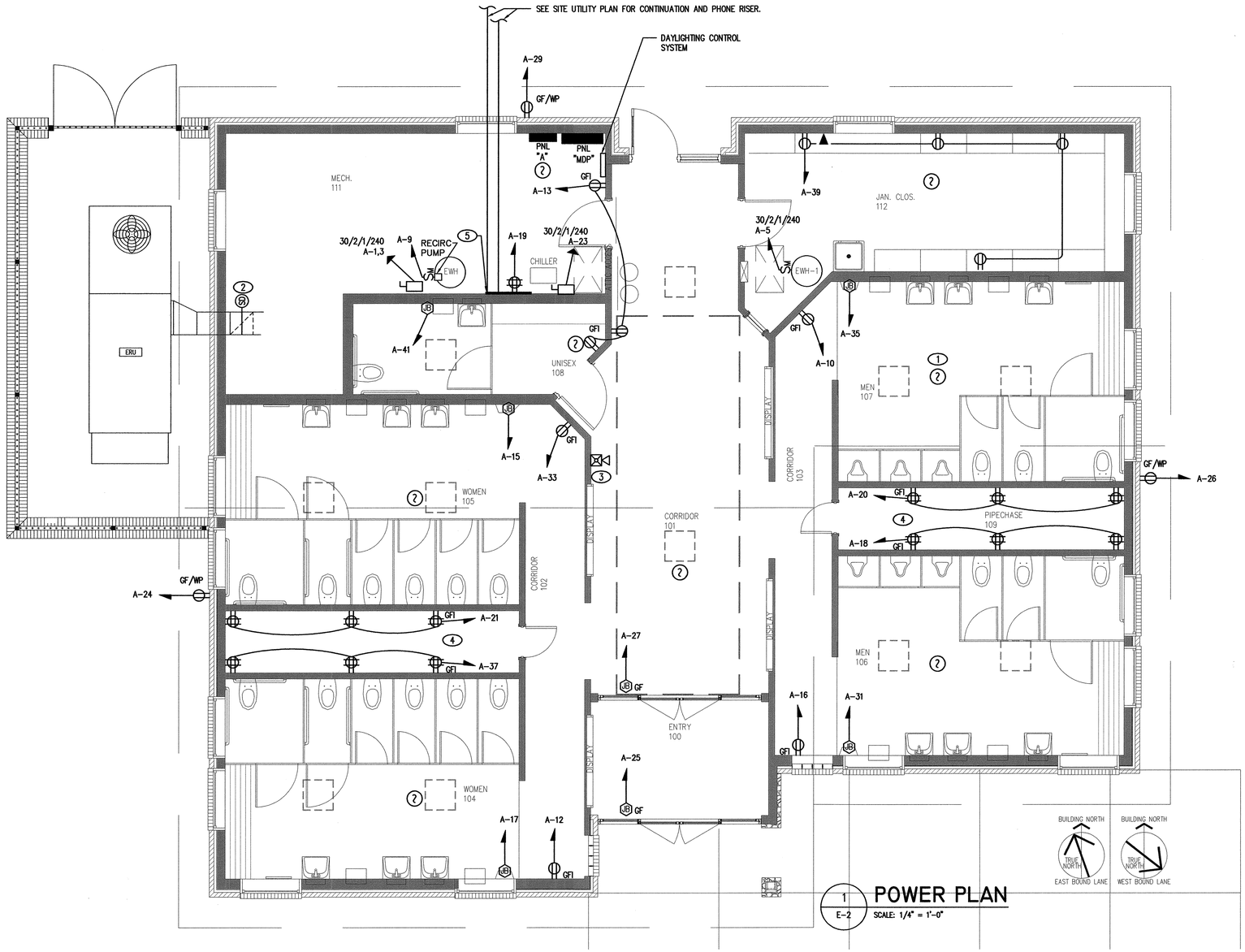
TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

SHEET NO. E1 OF 3



1 POWER PLAN
E-2 SCALE: 1/4" = 1'-0"

LOAD SERVED	VA PER PHASE A	VA PER PHASE B	CKT. BRKR.	CKT. NO.	NEUTRAL A B	CKT. NO.	CKT. BRKR.	VA PER PHASE A	VA PER PHASE B	LOAD SERVED
EWH	2250		30	1		2	20	1334		LTS
2#10, #10 EGC., 1/2" C.		2250	30	3		4	20		1334	LTS
EWH-1	1650		20	5		6	20	512		LTS
SPARE		.	20	7		8	20		594	LTS
RECIRC PUMP	100		20	9		10	20	180		RECEPT
SMOKE DETECTORS (BREAKER LOCK)		100	20	11		12	20		180	RECEPT
RECEPT	540		20	13		14	20	100		DUCT DETECTOR & H/S RELAY
HAND DRYER		1500	20	15		16	20		180	RECEPT
HAND DRYER	1500		20	17		18	20	720		FLUSH VALVE SENSORS
TELEPHONE EQUIP.		500	20	19		20	20		720	FLUSH VALVE SENSORS
FLUSH VALVE SENSORS	720		20	21		22	20	728		EXTERIOR LTS
EWC (GFI BREAKER)		600	*20*	23		24	20		180	RECEPT
AUTO SLIDING DOOR	600		20	25		26	20	180		RECEPT
AUTO SLIDING DOOR		600	20	27		28	20		100	DUCT DETECTOR HORN/STROBE SYSTEM
RECEPT	180		20	29		30	.	.		.
HAND DRYER		1500	20	31		32	.		.	.
RECEPT	180		20	33		34	.	.		.
HAND DRYER		1500	20	35		36	.		.	.
FLUSH VALVE SENSORS	720		20	37		38	.	.		.
RECEPT		720	20	39		40	.		.	.
HAND DRYER	1500		20	41		42	.	.		.

C/B TEMP. 75° C. RATING 120/240 V 1 PH 3 W
MOUNTING SURFACE GROUND BUS [X] YES [ ] NO
MAIN CIRCUIT BREAKER [ ] YES [X] NO RATING N/A
SERVICE ENTR. RATED [ ] YES [ ] NO BUS 200 LUG 200 SN 200
MINIMUM AIC (K AMPS) 22

NEW PANEL
"A"
(REST AREA BLDG.)

LOAD TYPE		EXIST.	KVA NEW	TOTAL	NEC DEM. FACTOR ①	KVA DEMAND
GENERAL LIGHTING		.	3.6	3.6	125%	4.5
GENERAL USE RECEPTACLES		.	2.5	2.5	≤10KVA@100%	2.5
					>10KVA@50%	.
MOTORS AND EQUIPMENT	LARGEST	.	1.5	1.5	125%	1.8
	ALL OTHERS	.	16.3	16.3	100%	16.3
WATER HEATERS		.	6.1	6.1	125%	7.6
KITCHEN EQUIPMENT		.	.	.	100%	.
FIX. ELEC. SPACE HEAT.		.	.	.	100%	.
SHOW WINDOW LIGHTS		.	.	.	125%	.
SIGN		.	.	.	125%	.
EXTERIOR LIGHTS		.	.	.	100%	.
PANEL/FEEDER (TOTAL KVA)						31.2
(TOTAL KVA) X 1000 / VOLTS = TOTAL AMPS						130

* * GFI BREAKER

LOAD SERVED	VA PER PHASE A	VA PER PHASE B	CKT. BRKR.	CKT. NO.	NEUTRAL A B	CKT. NO.	CKT. BRKR.	VA PER PHASE A	VA PER PHASE B	LOAD SERVED
HVAC UNIT	15525		150	1		2	200	17240		PANEL 'A'
–		15525	150	3		4	200		15974	–
SPACE	.		.	5		6	.	.		SPACE
–		.	.	7		8	.		.	.
	.	.	.					.	.	.

C/B TEMP. 75° C. RATING 120/240 V 1 PH 3 W
MOUNTING SURFACE GROUND BUS [X] YES [ ] NO
MAIN CIRCUIT BREAKER [ ] YES [X] NO RATING N/A
SERVICE ENTR. RATED [X] YES [ ] NO BUS 400 LUG 400 SN 400
MINIMUM AIC (K AMPS) 22

① DEMAND FACTORS PER NEC 220, PART B.
② LARGEST OF: NEC TABLE 220-3(a) OR CONNECTED LOAD.
③ NEC TABLE 220-20.
④ NEC 220-15.
⑤ NEC 220-12, 200 VA/LINEAR FT.
* NON-COINCIDENT LOADS, LARGEST OF THE TWO LOADS.

NEW PANEL
"MDP"
(REST AREA BLDG.)

LOAD TYPE		EXIST.	KVA NEW	TOTAL	NEC DEM. FACTOR ①	KVA DEMAND
GENERAL LIGHTING ②		.	3.6	3.6	125%	4.5
GENERAL USE RECEPTACLES		.	2.5	2.5	≤10KVA@100%	2.5
					>10KVA@50%	.
MOTORS AND EQUIPMENT	LARGEST	.	11.1	11.1	125%	13.8
	ALL OTHERS	.	17.8	17.8	100%	17.8
WATER HEATERS		.	6.1	6.1	125%	7.6
KITCHEN EQUIPMENT ③		.	.	.	100%	.
FIX. ELEC. SPACE HEAT. ④		.	20.0	20.0	100%	20.0
SHOW WINDOW LIGHTS ⑤		.	.	.	125%	.
SIGN		.	.	.	125%	.
EXTERIOR LIGHTS		.	.	.	125%	.
PANEL/FEEDER (TOTAL KVA)						66.2
(TOTAL KVA) X 1000 / VOLTS = TOTAL AMPS						275

ELECTRICAL NOTES

1. COORDINATE LOCATION OF SMOKE DETECTORS WITH MECHANICAL PLANS SO POSITION IS 3' FROM SUPPLY DIFFUSERS AND GRILLES. ALL SMOKE DETECTORS WIRED ON CIRCUIT A-11.
2. DUCT DETECTOR HORN/STROBE SYSTEM SHALL BE CONNECTED TO CIRCUIT A-28.
3. CEILING MTD. HORN/ STROBE FOR DUCT DETECTOR- MANUFACTURER SYSTEM SENSOR #D4120 AC/DC 120 VOLT WITH REMOTE STATION HORN/STROBE MODEL #RTS2-AOS EQUALS BY EST & NOTIFIER.
4. GFI PROTECTED QUAD OUTLET IN PIPE CHASE FOR AUTOMATIC FLUSH VALVE SENSOR. COORDINATE EXACT ROUGH-IN WITH P.C., TYP.
5. 4x4x3/4" FIRE RATED TELEPHONE EQUIPMENT BOARD.

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
RALEIGH, NORTH CAROLINA 27601
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DRAWING TITLE:

DRAWN BY: C. DANIELS CHECKED BY: J. HOBBY ISSUE DATE: 27 OCT 09

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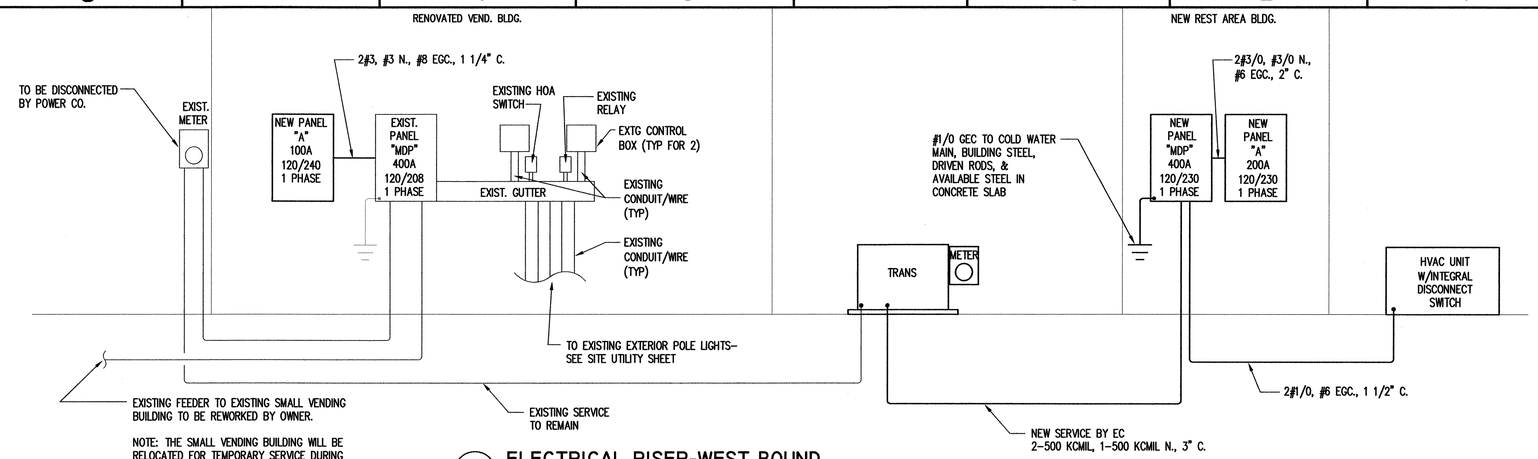
SEAL: NORTH CAROLINA PROFESSIONAL SEAL 7911 ENGINEER JOEL M. HOBBY 10/27/09

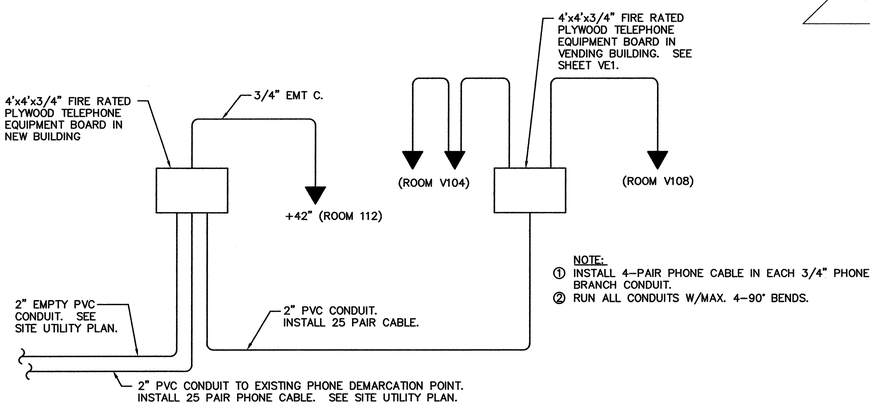
TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

SHEET NO. E2 OF 3



1 / E-3 **ELECTRICAL RISER-WEST BOUND**

SCALE: NTS
NOTE: BURY ALL NEW CONDUITS MIN. 30" DEEP



NOTE:
① INSTALL 4-PAIR PHONE CABLE IN EACH 3/4" PHONE BRANCH CONDUIT.
② RUN ALL CONDUITS W/MAX. 4-90° BENDS.

PHONE RISER

SCALE: NTS

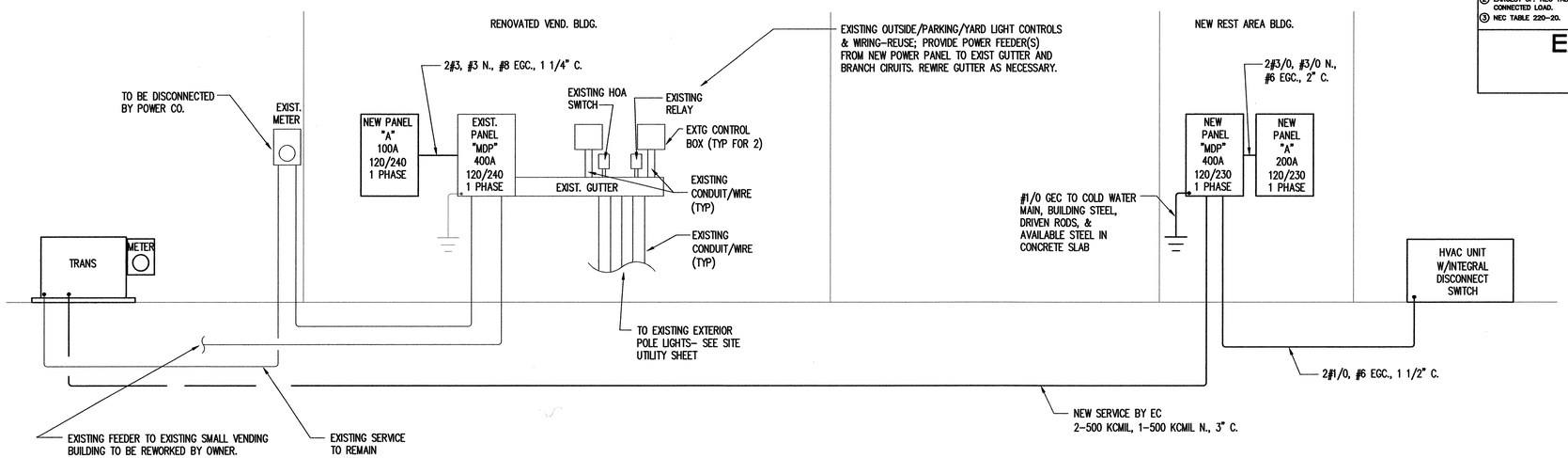
LOAD SERVED	VA PER PHASE A	VA PER PHASE B	CKT. BRKR.	CKT. NO.	NEUTRAL A B	CKT. NO.	CKT. BRKR.	VA PER PHASE A	VA PER PHASE B	LOAD SERVED
EXIST. ROADWAY LIGHTS	1100		30	1		2	20	1456		CU
-		1100	30	3		4	20		1456	2#12, #12 G., 1/2" C.
EXIST. ROADWAY LIGHTS	1100		30	5		6	20	60		AHU
-		1100	30	7		8	20		1456	CU
EXIST. ROADWAY LIGHTS	1100		30	9		10	20	1456		2#12, #12 G., 1/2" C.
-		1100	30	11		12	20		60	AHU
EXIST. ROADWAY LIGHTS	1100		30	13		14	20	.		.
-		1100	30	15		16	20		.	.
.	.		20	17		18	20	.		.
.		.	20	19		20	20		.	.
CU-1	3000		40	21		22	20	.		.
2#10, #10 G., 1/2" C.		3000	40	23		24	20		.	.
AHU-1	6360		60	25		26	60	.		.
2#6, #10 G., 3/4" C.		6360	60	27		28	60		.	.
.	.		20	29		30	20			.
.		.	20	31		32	20		1650	EWH-1
.	.		20	33		34	20	.		SPARE
.		.	20	35		36	20			.
VENDING BLDG. PNL 'A'	6662		100	37		38	20			.
-		4442	100	39		40	20			.
.	.		S	41		42	S			.
	.	.		TOTAL VA PER PHASE				.	.	

C/B TEMP. 75° C. RATING 120/240 V 1 PH 3 W
MOUNTING SURFACE GROUND BUS [X] YES [ ] NO
MAIN CIRCUIT BREAKER [X] YES [ ] NO RATING 400
SERVICE ENTR. RATED [ ] YES [ ] NO BUS 400
MINIMUM AIC (K AMPS) . LUG 400
SN 400

① DEMAND FACTORS PER NEC 220, PART B.
② LARGEST OF: NEC TABLE 220-3(a) OR CONNECTED LOAD.
③ NEC TABLE 220-20.
④ NEC 220-15.
⑤ NEC 220-12, 200 VA/LINEAR FT.
* NON-COINCIDENT LOADS, LARGEST OF THE TWO LOADS.

EXIST. PANEL "MDP"
(VENDING BLDG.)

LOAD TYPE		KVA EXIST.	KVA NEW	KVA TOTAL	NEC DEM. FACTOR ①	KVA DEMAND
GENERAL LIGHTING ①		.	1.6	1.6	125%	2.1
GENERAL USE RECEPTACLES		.	2.7	2.7	≤10KVA@100%	2.7
					>10KVA@50%	.
MOTORS AND EQUIPMENT	LARGEST	.	6.0	6.0	125%	7.5
	ALL OTHERS	.	15.7	15.7	100%	15.7
WATER HEATERS		.	1.7	1.7	125%	2.1
KITCHEN EQUIPMENT ③		.	.	.	100%	.
FIX. ELEC. SPACE HEAT. ④		.	9.6	9.6	100%	9.6
SHOW WINDOW LIGHTS ⑤		.	.	.	125%	.
SIGN		.	.	.	125%	.
EXTERIOR LIGHTS		8.8	.	8.8	125%	11.0
PANEL/FEEDER (TOTAL KVA)						50.7
(TOTAL KVA) X 1000 / VOLTS = TOTAL AMPS						212



2 / E-3 **ELECTRICAL RISER-EAST BOUND**

SCALE: NTS
NOTE: BURY ALL NEW CONDUITS MIN. 30" DEEP

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
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DRAWING TITLE:

DRAWN BY: C. DANIELS CHECKED BY: J. HOBBY ISSUE DATE: 27 OCT 09

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SEAL: NORTH CAROLINA PROFESSIONAL SEAL 7911 ENGINEER JOEL M. HOBBY

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

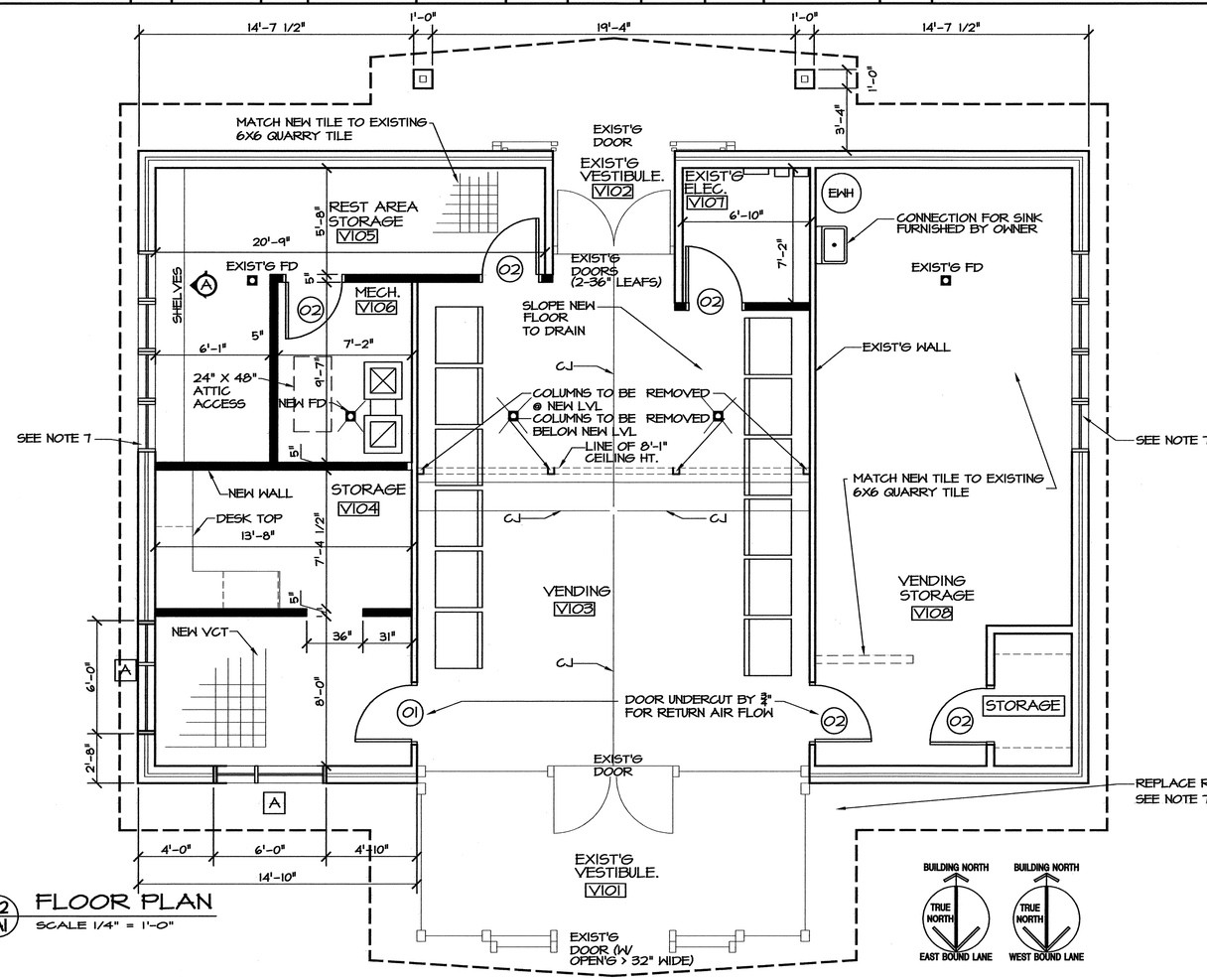
SHEET NO. E3 OF 3

FINISH - COLOR SCHEDULE (SEE SPEC. FOR EQUAL OR COMPETITIVE MANUFACTURERS)

ROOM	NO.	FLOOR		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING			REMARKS
		MAT.	COLOR	MAT.	COLOR	MAT.	COLOR	MAT.	COLOR	MAT.	COLOR	MAT.	COLOR	MAT.	COLOR	HEIGHT	
EXIST'G VISTIBULE	V101	EXIST'G QT	SEE SPEC'S	EXIST'G QT	SEE SPEC'S		SEE SPEC'S		SEE SPEC'S		SEE SPEC'S		SEE SPEC'S		SEE SPEC'S	VARIES	GLASS ENTRY WAY
EXIST'G VISTIBULE	V102	EXIST'G QT		EXIST'G QT		FC		FC		FC		FC				8'-1"	GLASS ENTRY WAY
VENDING	V103	CONC.		1X3 TRIM		FC		FC		FC		FC		PLY		VARIES	MATCH EXIST'G PLYWOOD CLG'S SEE NOTE 8
STORAGE	V104	VCT		RUB.		DW		DW		DW		DW		DW*		9'-4"	SEE NOTE 2/ * SEE NOTE 5
RESTROOM STOR.	V105	EXIST'G 6X6 TILE		RUB.		DW		DW		DW		DW		DW*		9'-4"	" " " "
MECH.	V106	NEW CONC.		RUB.		DW		DW		DW		DW		DW*		9'-4"	" " " "
ELEC.	V107	EXIST'G CONC.		RUB.		-		-		DW		-		-		9'-4"	PAINT ALL EXIST'G DRYWALLS
VENDING STORAGE	V108	EXIST'G 6X6 TILE	⩗	RUB.	⩗	DW	⩗	DW	⩗	DW	⩗	DW	⩗	DW*	⩗	9'-4"	SEE NOTE 2/ * SEE NOTE 5

DOOR - HARDWARE SCHEDULE (SEE SPEC. FOR EQUAL OR COMPETITIVE MANUFACTURERS).

DOOR				FRAME		HARDWARE							REMARKS
MARK	SIZE	MAT.	COLOR	MAT.	COLOR	LOCKSET	HINGES	CLOSER	STOP	PLATE KICK	WEATHS'P/ THRESHOLD		
1	3'-0"x7'-0"x1 3/4"	H.M.	10BB 13/250	H.M.	10BB 13/250	F04	A5112	C02511	L02162	-			ONE WAY REFLECTIVE GLASS
2	3'-0"x7'-0"x1 3/4"	H.M.	10BB 13/250	H.M.	10BB 13/250	F04	A5112	C02511	L02162	-			



A12/VA1 FLOOR PLAN
SCALE 1/4" = 1'-0"

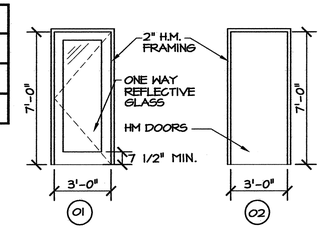
GENERAL NOTES:

1. REMOVE BRICK & STUD WALL & INSTALL NEW WINDOW, WINDOW SILL. (SEE DEMO PLAN VA4).
2. FUR-OUT EXISTING STUD/ TILE WALLS W/ 1X3 FURRING STRIPS @ 16" O.C. INSTALL NEW 5/8" DW, PAINT. PROVIDE 1X3 BASE @ ROOMS V105, V108. PROVIDE RUBBER BASE @ ROOM 104.
3. NEW STUD WALL W/ F-C PANELING ON BOTH SIDES W/ INSUL., PAINT. (SEE NOTE 2 FOR FINISHING).
4. NEW WOOD SHELVING SEE VA1.
5. ALL CEILINGS SHALL BE OVERLAID W/ 1-LAYER OF 5/8" DRYWALL.
6. FLOOR AT RM. V104 - REMOVE TILE, POUR CONC.TOPPING FLUSH W/ OLD CERAMIC TILE. PROVIDE NEW VCT.
7. REPAIR & PAINT ALL EXISTING FASCIA, SOFFIT & REPLACE WINDOWS.
8. FUR-OUT EXISTING STUD/ TILE WALLS W/ 1X3 FURRING STRIPS @ 16" O.C. INSTALL NEW F-C PANELING SIERRA-8, PAINT. PROVIDE 1X3 BASE & 1X3 CEILING TRIM @ ROOM V103 CEILING SHALL BE REPLACED W/ 1- LAYER OF 1/2" PLYWOOD.

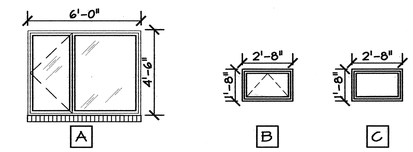
WALL LEGEND:

EXIST'G WALLS TO REMAIN

NEW 2X4 FRAMED WALL W/ 5/8" GYP.



F5/VA1 DOOR TYPES
SCALE 1/4" = 1'-0"

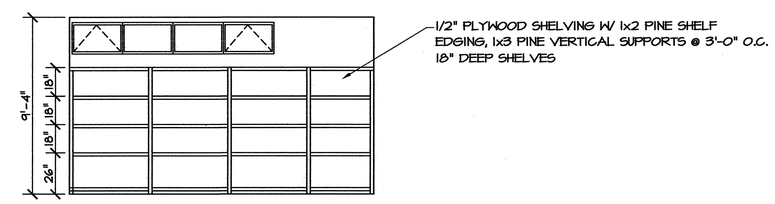


WINDOW SCHEDULE: (SEE SPEC. FOR EQUAL OR COMPETITIVE MANUFACTURERS)

A PELLA METAL CLAD FIXED / OPERABLE WINDOW, BROWN FINISH. INSULATED GLASS SOLAR COOL GLARE

B PELLA METAL CLAD OPERABLE WINDOW, BROWN FINISH. INSULATED GLASS SOLAR COOL GLARE, MATCH EXIST. SIZE.

C PELLA METAL CLAD FIXED WINDOW, BROWN FINISH. INSULATED GLASS SOLAR COOL GLARE, MATCH EXIST. SIZE.



D5/VA1 ELEVATION-(A)-STORAGE V105
SCALE 1/4" = 1'-0"

PROJECT:

I-40 REST AREA

CATAWBA COUNTY — NORTH CAROLINA

ARCHITECT/ENGINEERS:

FACILITIES DESIGN

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DRAWING TITLE: FLOOR PLAN/ SCHEDULES

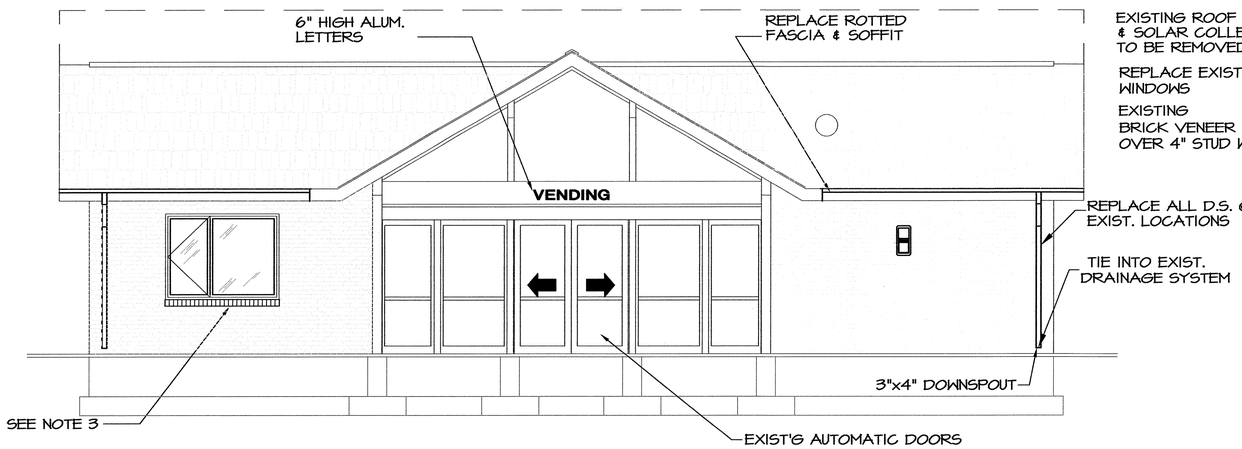
DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD REGISTERED ARCHITECT 4241 12.2.09 NORTH CAROLINA RALEIGH, N.C.

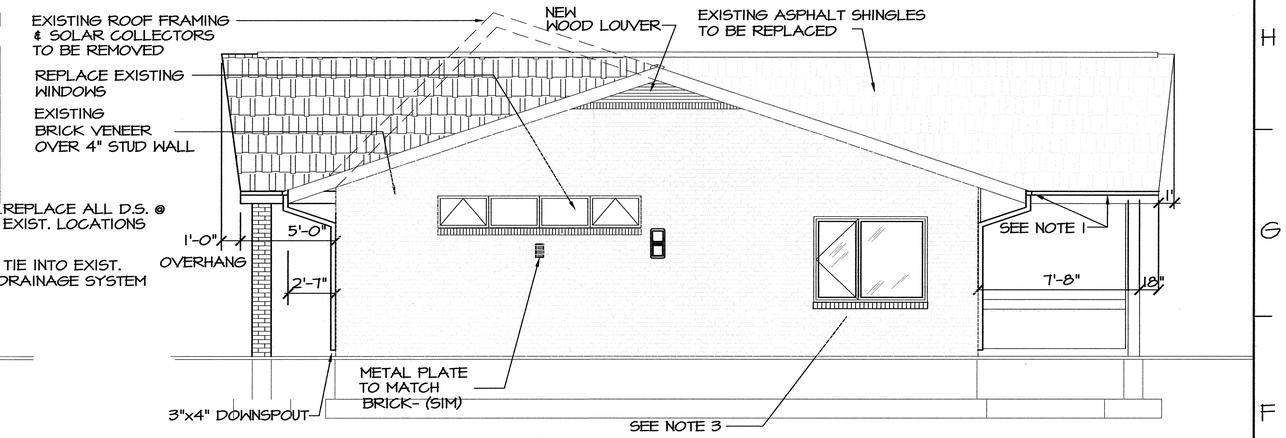
TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

NO.	REVISIONS/SUBMISSIONS	DATE

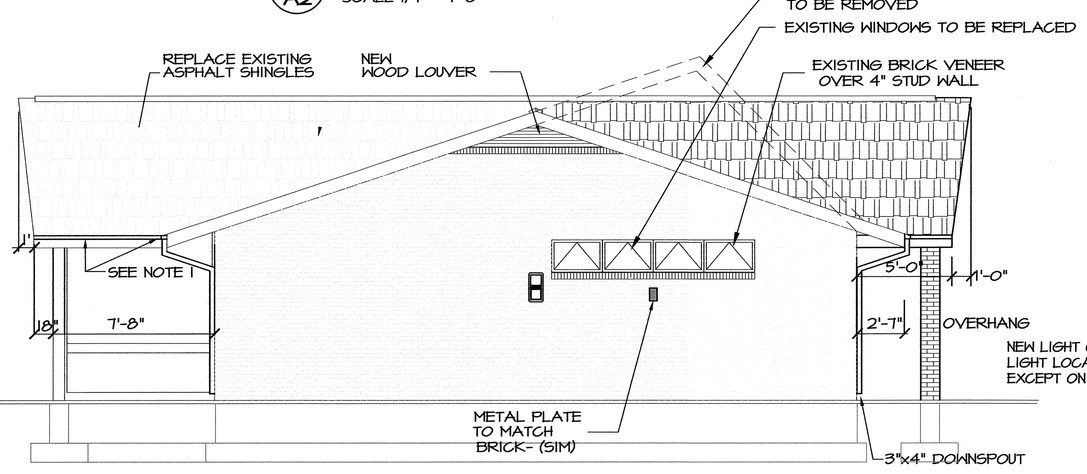
SHEET NO. VA1 OF 4



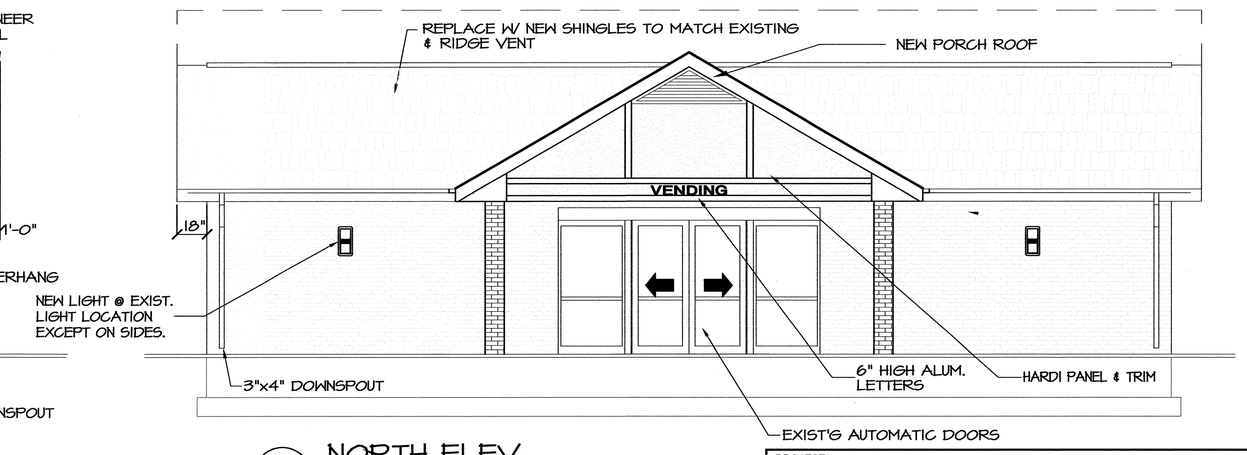
C5 / A2 SOUTH ELEV.
SCALE 1/4" = 1'-0"



C10 / A2 WEST ELEV.
SCALE 1/4" = 1'-0"



F5 / A2 EAST ELEV.
SCALE 1/4" = 1'-0"



F10 / A2 NORTH ELEV.
SCALE 1/4" = 1'-0"

GENERAL NOTES:

1. REPLACE EXISTING GUTTERS W/ NEW LEAFGUARD GUTTERS.
2. EXISTING SHINGLES TO BE REPLACED
3. NEW WINDOW W/ LINTEL (∠ 3 1/2 X 3 1/2 X 3/8"), TOOTH-IN BRICK JAMBS & NEW BRICK ROLOCK SILL.

PROJECT:
I-40 REST AREA
CATAWBA COUNTY — NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
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DRAWING TITLE: ELEVATIONS

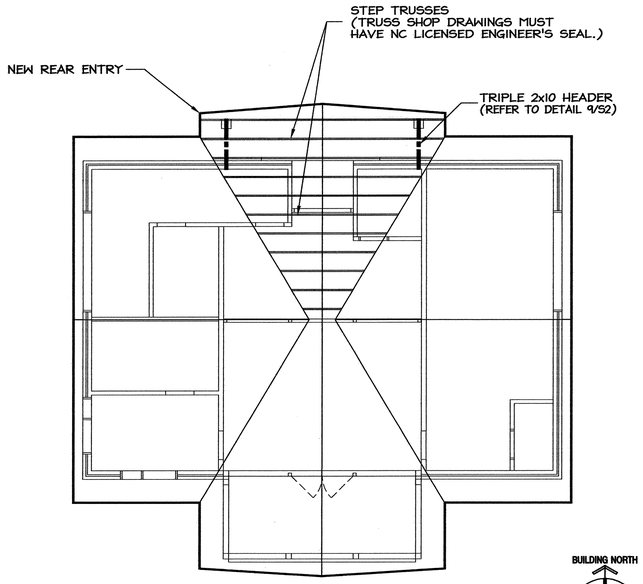
DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD REGISTERED ARCHITECT 4241 12-4-09 NORTH CAROLINA RALEIGH, N.C.

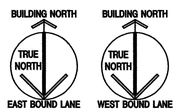
TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

NO.	REVISIONS/SUBMISSIONS	DATE

SHEET NO. VA2 OF 4

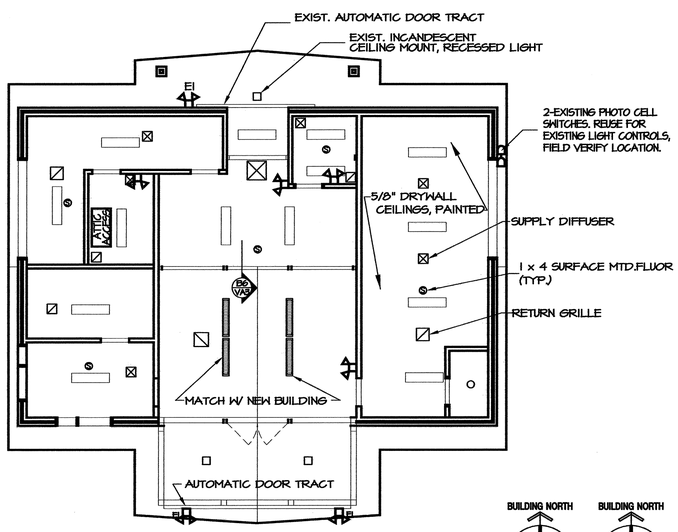


E10 VA3 TRUSS OVER BUILD PLAN
SCALE 1/8" = 1'-0"

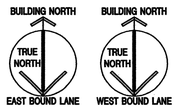


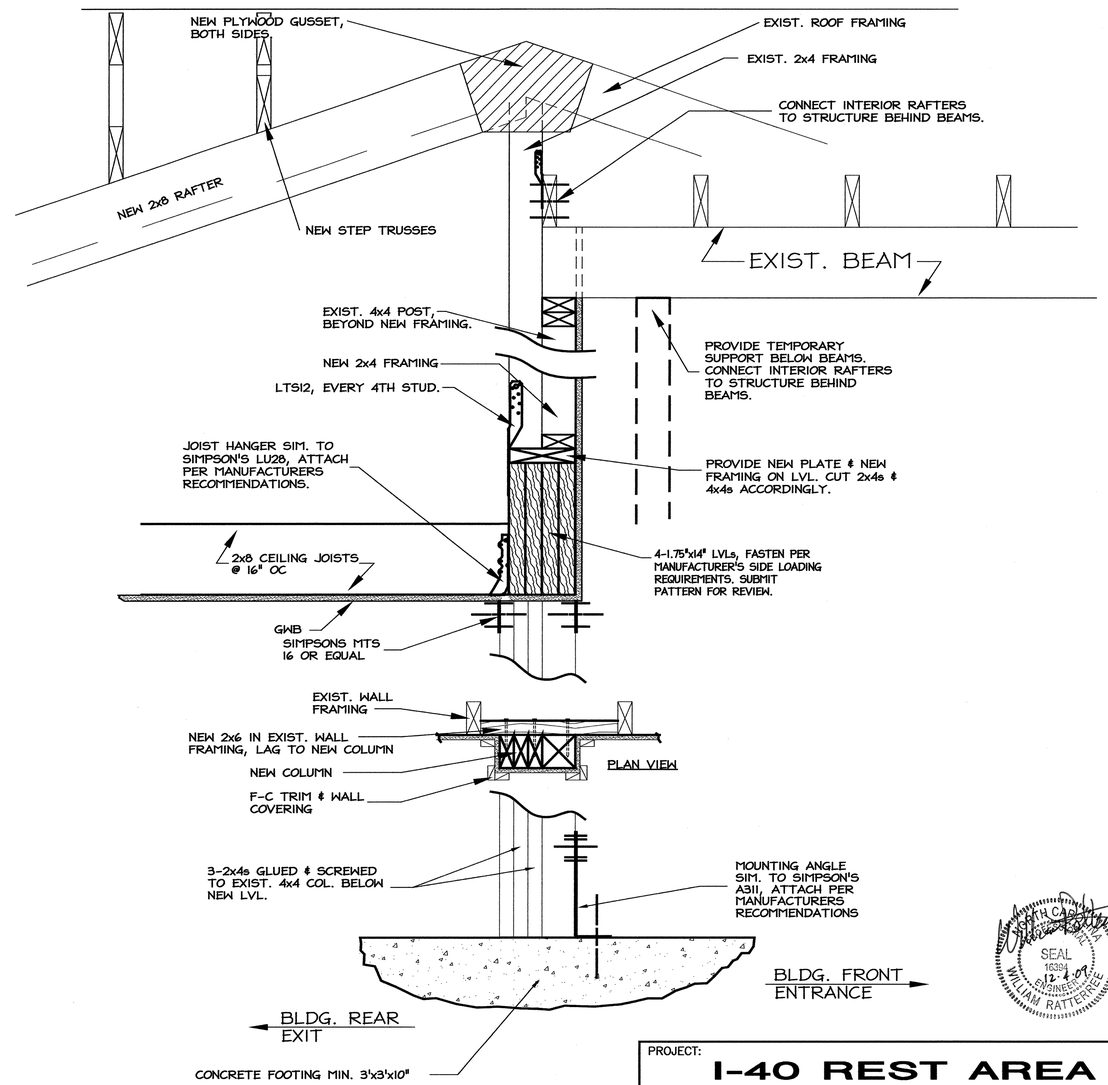
LEGEND:

1X4 FLUORESCENT	EMERGENCY LIGHT INTERIOR
8"x3" FLUORESCENT	EMERGENCY LIGHT EXTERIOR
RECESSED FLUORESCENT	SMOKE DETECTOR
BLDG. EXTERIOR LIGHTS FLUORESCENT SOFFIT	SUPPLY DIFFUSER
CEILING MOUNT, RECESSED LIGHT INCANDESCENT	RETURN GRILLE



A10 VA3 REFLECTED CEILING PLAN
SCALE 1/8" = 1'-0"





B6 VA3 STRUCTURAL SECT.
SCALE: 3/4" = 1'- 0"

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
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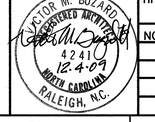
DRAWING TITLE:
CEILING PLAN

DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL:



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K-4907	39893.3.ST1	C202172	STM-040-2(146)117

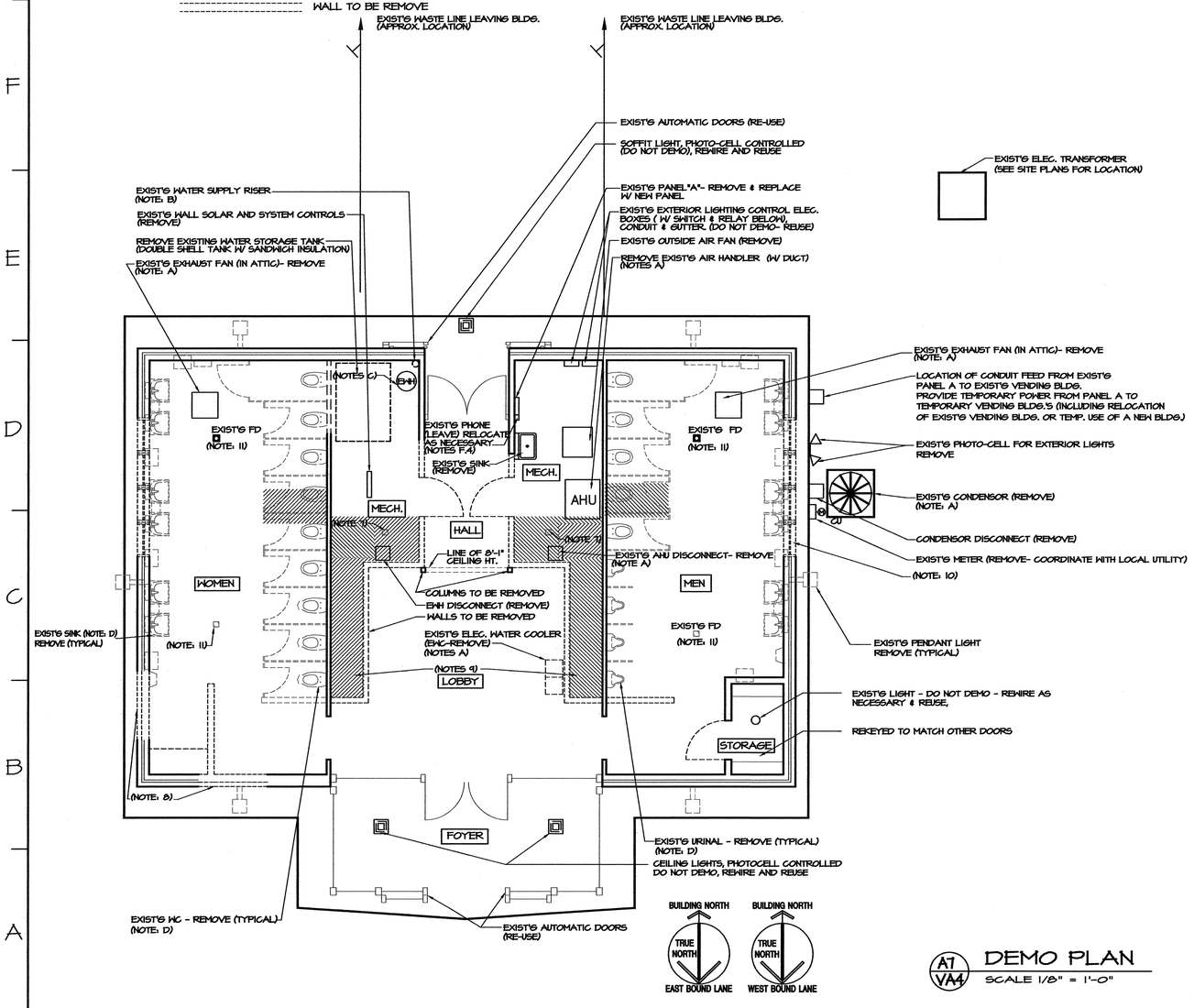
NO.	REVISIONS/SUBMISSIONS	DATE

SHEET NO.
VA3
OF 4

GENERAL NOTES:

1. REMOVE EXISTING STUD WALLS.
2. REMOVE EXISTING MASONRY & TILE WALLS.
3. REMOVE EXISTING SOFFIT.
4. REMOVE ALL TOILET PARTITIONS, ALL FIXTURES & CAPS.
5. REMOVE TILE & CONC. SLAB AT OLD WOMEN'S RESTROOM & LOBBY.
6. EXISTING FLOOR DRAIN TO REMAIN. TIE NEW DRAINS INTO EXISTING LINES (TRAP PRIMERS).
7. ☐ EXISTING FD; CAP & SEAL TO MATCH ARCH. FINISHES.
8. REMOVE BRICK & STUD WALL & INSTALL NEW WINDOW, WINDOW SILL.
9. REMOVE TOP SURFACE OF CONC. FLOOR & TILE, TO MATCH EXISTING TILE FLOOR.
10. REMOVE & REPLACE EXISTING WINDOWS TO MATCH NEW BUILDING.
11. EXISTING FLOOR DRAIN (SEE VP1).

---------- WALL TO BE REMOVE



A7 / VA4 DEMO PLAN
SCALE 1/8" = 1'-0"

GENERAL NOTES

1. THE PME DEMOLITION SCOPE DOES NOT REQUIRE REMOVAL OF ANY PIPE OR CONDUIT LOCATED INSIDE BUILDING AND BELOW FINISHED FLOOR ELEVATION UNLESS SPECIFICALLY NOTED OR REQUIRED TO COMPLETE OTHER WORK. UNLESS OTHERWISE NOTED, ALL DEMO'D CONDUIT AND PIPE ENTERING/EXITING FLOOR SHALL BE CUT OFF AT OR JUST BELOW FLOOR LEVEL AND PERMANENTLY SEALED IN A MANNER THAT DOES NOT INTERFERE WITH OR ADVERSELY AFFECT THE CONSTRUCTION AND FINISHES REQUIRED IN RENOVATED BLDG AND IN A MANNER THAT MEETS APPLICABLE CODE REQUIREMENTS.

2. THE FLOOR DRAINS AND UNDERGROUND WASTE LINES SHALL REMAIN FULLY FUNCTIONAL FOLLOWING DEMOLITION AND RENOVATION.

3. PIPE AND CONDUIT MAY BE ABANDONED IN WALLS PROVIDED PIPE IS DRAINED, WIRE IS REMOVED FROM CONDUIT, AND BOTH ARE SEALED. BOTH SHALL BE CLEARLY LABELED AS ABANDONED AT EXPOSED LOCATIONS AND AT EACH END.

4. ALL PENETRATIONS, DAMAGE, AND OPENINGS IN WALLS, CEILINGS, ROOFS, FLOORS, OR DOORS WHICH RESULTS FROM DEMOLITION SHALL BE REPAIRED, SEALED AND FINISHED IN A MANNER WHICH IS CONSISTENT WITH THE CONSTRUCTION AND FINISHES REQUIRED FOR BUILDING RENOVATION. ALL FIRE BARRIER RATINGS SHALL BE MAINTAINED.

5. REMOVAL OF ANY DEVICE OR EQUIPMENT INCLUDES THE REMOVAL OF ALL RELATED ELECTRICAL, PLUMBING, AND MECHANICAL SYSTEM COMPONENTS. THIS INCLUDES, BUT IS NOT LIMITED TO, MOUNTING BOLTS, CLAMPS, SUPPORTS, FASTENERS, WIRING (UP TO CIRCUIT BREAKER), CONDUIT (UP TO FEEDER PANEL), SWITCHES, DISCONNECTS, CONTROLS, DUCT, DAMPERS, REGISTERS, GRILLS, DIFFUSERS, PIPE, VALVES, INSULATION, ETC. ASSOCIATED WITH THAT DEVICE UNLESS SPECIFICALLY NOTED OTHERWISE. PROVIDE ALL PLUMBING VALVES TO OWNER REP.(G. HARRELL OR HIS DESIGNEE).

6. GENERAL CONTRACTOR (GC) HAS OVERALL RESPONSIBILITY FOR COORDINATING DEMOLITION AND COMPLETING ALL DEMOLITION. TRADE RESPONSIBILITY FOR SPECIFIC DEMOLITION SCOPE/TASKS SHALL BE THE SAME CONTRACTOR/TRADE WHO WOULD BE RESPONSIBLE FOR INSTALLING/RENOVATING SIMILAR ITEMS AS PER THIS PROJECTS DESIGN PLANS AND SPECIFICATIONS.

7. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH LOCAL UTILITIES.

A. EQUIPMENT DEMOLITION

REMOVE AIR HANDLER (AHU), CONDENSOR, EXHAUST FAN, HEATER(S) (INCLUDING ANY BASEBOARD OR DUCT HEATERS), AND ELECTRIC WATER COOLER (EWC). THE SOUTHBOUND CONDENSOR SHALL BE PROVIDED TO OWNER (G HARRELL OR HIS DESIGNEE)

B. COLD WATER (CW) SUPPLY & DISTRIBUTION

EXISTING WATER SUPPLY RISER ENTERS BLDG AT THIS LOCATION. REMOVE ALL EXISTING CW PIPING AND COMPONENTS BEYOND APPROXIMATE 6" ABOVE MECHANICAL ROOM FLOOR. SEE PLUMBING RISER (SUPPLY WATER & BACKFLOW PREVENTER DETAIL) ON DRAWING VP-1. CW PIPING REMOVAL INCLUDES ALL PIPING TO ELEC. WATER HEATER (EWH), URINALS, WATER CLOSETS, BATHROOM SINKS, ELECTRIC WATER COOLER (EWC), HOSEBIBBS, ETC. IN EXISTING BUILDING.

C. ELECTRIC WATER HEATER (EWH), HOT WATER (HW) PIPE, AND TEMPERED WATER (TW) PIPE

BOTH EWH'S (NORTH & SOUTH BOUND) WILL BE REMOVED, INCLUDING ALL PIPE, SOUTHBOUND EWH SHALL BE PROVIDED TO OWNER'S REP. (G.HARRELL OR DESIGNEE). NORTHBOUND EWH SHALL BE DISCARDED.

REMOVE PIPING AND DEVICES FOR HW SUPPLY AND TEMPERED WATER BETWEEN EWH AND ALL OTHER PLUMBING FIXTURES IN BUILDING. THIS INCLUDES REMOVAL OF ALL PIPING TO AND FROM SOLAR COLLECTION/ PANEL SYSTEM.

D. PLUMBING FIXTURES

REMOVE ALL SINKS, URINALS, WATER CLOSETS, HOSE BIBBS, ETC. IN MEN'S AND WOMEN'S BATHROOMS INCLUDING ALL PLUMBING PIPE, VALVES, FIXTURES, AND THEIR SUPPORTS / CARRIERS. SEE SEPARATE NOTES FOR PIPING FOR CW, HW, WASTE, AND VENTS.

E. WASTE & VENT PIPING

E.1 REMOVE ALL EXPOSED WASTE & VENT LINES IN ROOMS AND IN ATTIC. ALL EXISTING VTR'S TO BE REMOVED.

E.2 PERMANENTLY PLUG EXISTING WASTE LINES FROM WATER COOLERS (EWC), BATHROOM SINKS, WATER CLOSETS, AND URINALS CONSISTENT WITH REQUIREMENTS FOR FINAL WALL AND FLOOR FINISHES WHEN BUILDING IS RENOVATED. WASTE LINES SHALL BE PLUGGED BELOW FLOOR LEVEL WHERE THEY ENTER FLOOR INSIDE A ROOM (INCLUDING PIPE CHASE ROOMS). OTHERWISE, THEY SHALL BE PLUGGED IN WALLS.

F. ELECTRICAL – LIGHTING & MISCELLANEOUS

F.1 DO NOT REMOVE EXTERIOR AREA LIGHTING SUPPLIED FROM EXTG PANEL "A". IT REMAINS ON PANEL "A" (SEE DRAWING VE-2).

F.2 UNLESS NOTED OTHERWISE, REMOVE ALL INTERIOR LIGHTING, EXTERIOR PENDANT LIGHTING, EXIT SIGNS, EMERGENCY LIGHTING, AND OTHER MISCELLANEOUS LIGHTING & DEVICES INSTALLED INSIDE THIS BUILDING OR MOUNTED ON THE EXTERIOR OF THIS BUILDING.

F.3 UNLESS OTHERWISE NOTED, REMOVE ALL MISCELLANEOUS ELECTRICAL DEVICES INCLUDING ELECTRIC HAND DRYERS, ELECTRICAL OUTLETS, AUTOMATIC FLUSH DEVICES, AND SINK FAUCET CONTROLS

F.4 DO NOT REMOVE EXISTING PHONE SERVICE, WIRING, DEVICES, OR JACKS FROM THIS BUILDING.

G. SOLAR COLLECTION SYSTEM FOR WATER HEATING

REMOVE ALL SOLAR PANELS FROM ROOF INCLUDING ALL PIPING & VALVES. REMOVE ALL PUMPS, HEAT EXCHANGERS, TANKS, CONTROLS, EQUIPMENT, THERMOSTATS, INSULATION, PENETRATIONS, TANKS, ETC, FROM BLDG.

NORTH CAROLINA PROFESSIONAL SEAL 7911 ENGINEER MODEL M. HOBBS 12/3/09

NORTH CAROLINA PROFESSIONAL SEAL 16394 ENGINEER WILLIAM RATTERREE 12-3-09

PROJECT:
I-40 REST AREA
CATAWBA COUNTY — NORTH CAROLINA

ARCHITECT/ENGINEERS:
FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
RALEIGH, NORTH CAROLINA 27601
(919) 715-0400 FAX (919) 715-0399

DRAWING TITLE:
DEMO PLAN

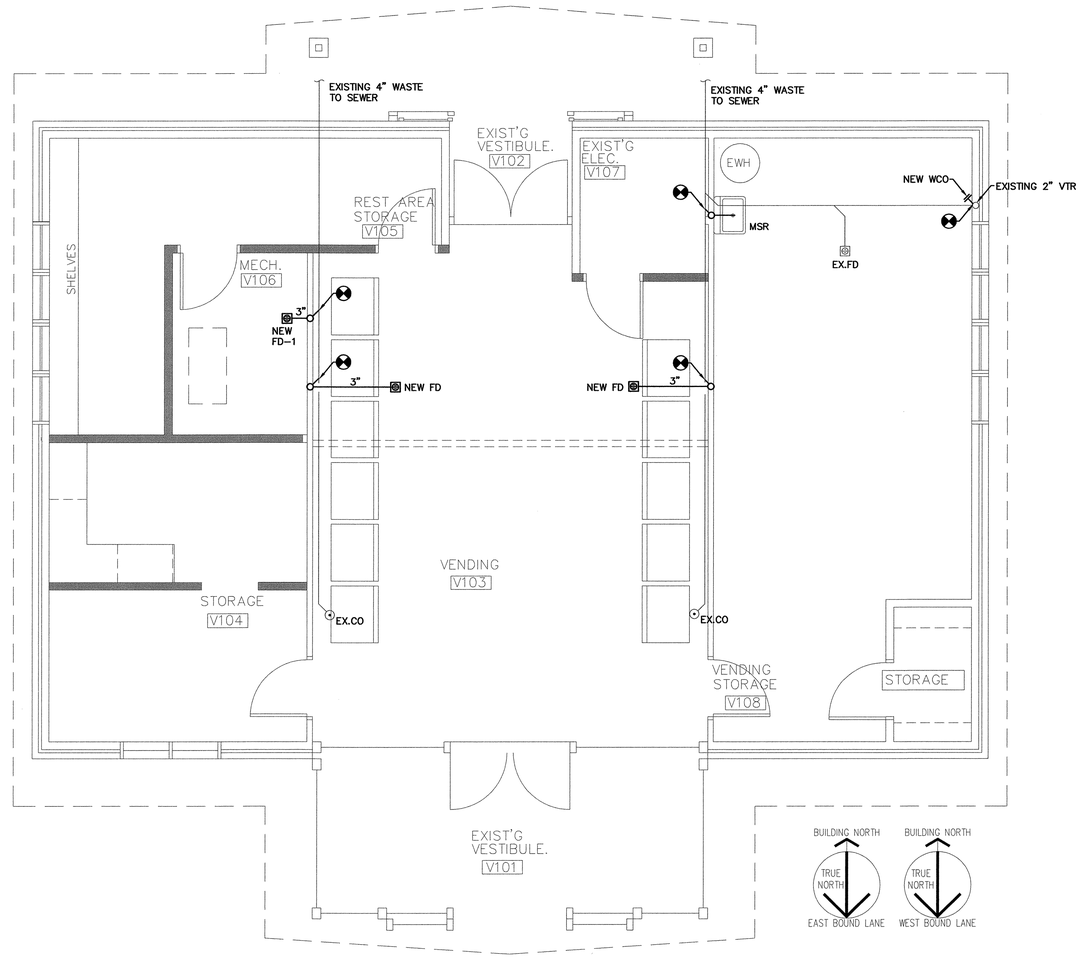
DRAWN BY: CLS CHECKED BY: V. BUZARD ISSUE DATE: 27 OCT 2009

SEAL: VICTOR M. BUZARD, REGISTERED ARCHITECT 4241 12-2-09 NORTH CAROLINA RALEIGH, N.C.

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

NO.	REVISIONS/SUBMISSIONS	DATE

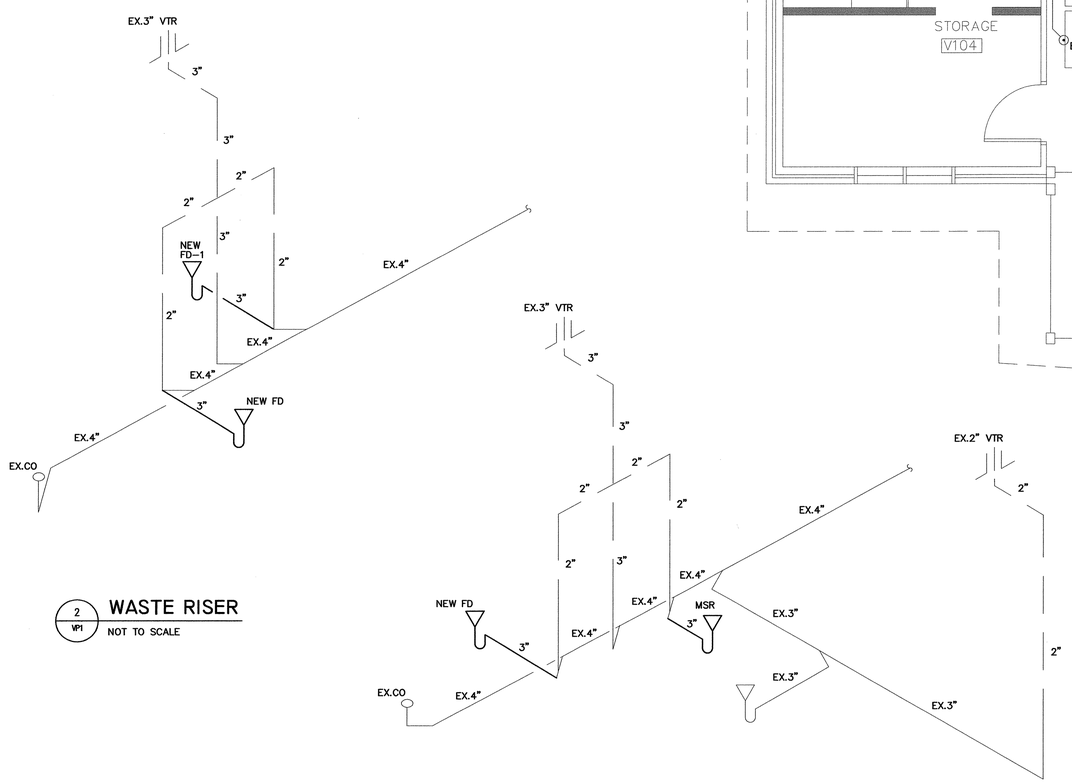
SHEET NO. VA4 OF 4



1 / VP-1 **PLUMBING PLAN-WASTE**

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

FOR DEMO SEE SHEET VA4



2 / VPI **WASTE RISER**

NOT TO SCALE

GENERAL NOTES - PLUMBING

1. PREPLAN ALL WORK PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY PART OF THE WORK DESCRIBED BY THIS DRAWING.
2. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS WITH EXISTING FIELD CONDITIONS OR THE WORK OF OTHER TRADES.
3. RESOLVE ALL CONFLICTS PRIOR TO INCURRING ANY MATERIAL OR LABOR EXPENSES.
4. COMPLY WITH THE MANUFACTURER'S TECHNICAL INSTRUCTIONS WHEN INSTALLING PLUMBING FIXTURES, MATERIALS, AND DEVICES.
5. LOCATE FIXTURES AND EQUIPMENT GENERALLY AS SHOWN ON THE PLANS; HOWEVER, COORDINATE LOCATIONS WITH ACTUAL FIELD CONDITIONS TO PRESERVE ALL CODE-REQUIRED AND MANUFACTURER - REQUESTED SERVICE CLEARANCES.
6. COORDINATE ROUTING OF ALL PIPING WITH BUILDING STRUCTURE AND WITH THE WORK OF OTHER TRADES. OFFSET VENT PIPING AROUND BEAMS AND JOISTS AS NECESSARY.
7. AT EXTERIOR WALL, INSTALL WATER PIPING ON HEATED SIDE OF WALL INSULATION.
8. PROVIDE WATER HAMMER ARRESTORS AT THE END OF EACH COLD AND HOT WATER BRANCH RISER. SIZE ARRESTOR APPROPRIATELY.
9. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT INSTALLED AS PART OF HIS CONTRACT. UNLESS OTHERWISE NOTED, THIS CONTRACTOR SHALL WIRE FROM HIS EQUIPMENT TO DISCONNECT SWITCHES, JUNCTION BOXES, OR PANELBOARD CIRCUIT BREAKERS AS PROVIDED BY THE ELECTRICAL CONTRACTOR.
10. DO NOT INSTALL ANY WATER PIPING IN THE MECHANICAL ROOM ABOVE ELECTRICAL PANELS, DISCONNECTS, OR MDPE.
11. LOCATION OF EXISTING PLUMBING IS APPROXIMATE.
12. FOR DEMO NOTES, SEE SHEET VA4.

PLUMBING LOAD SUMMARY
WASTE FIXTURE UNITS = 10
WATER FIXTURE UNITS = 10
TOTAL DEMAND G.P.M. = 15

WASTE AND VENT LEGEND:

- COLD WATER PIPE
- HOT WATER PIPE
- BALL VALVE
- HOSE BIBB
- WATER HYDRANT
- NEW VENT
- NEW WASTE
- C.O. — CLEAN OUT-PROVIDE CONCRETE RING FOR EXTERIOR CLEANOUTS
- W.C.O. — WALL CLEAN OUT
- FLOOR DRAIN
- VTR — VENT THROUGH ROOF
- TPC — TRAP PRIMER CONNECTION (TIE POINT)
- CONNECT TO EXISTING
- KEY NOTE NUMBER

PROJECT:

I-40 REST AREA

CATAWBA COUNTY — NORTH CAROLINA

ARCHITECT/ENGINEERS:

FACILITIES DESIGN
GENERAL SERVICES DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
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DRAWING TITLE:

DRAWN BY: M. WILLIAMS CHECKED BY: . ISSUE DATE: 27 OCT 09

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Suite 201, Cary, NC 27511
919-678-6107
Fax 919-678-6109

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 7911 ENGINEER JOEL M. HORST 10/30/09

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

SHEET NO. VPI OF 2

PLUMBING FIXTURE SCHEDULE:

HB HOSE BIBB (See note 4 below)
WOODFORD MODEL 24B, 3/4" STANDARD BRONZE HOSE BIBB W/ VACUUM BREAKER. INCLUDE KEYED OPERATION.

EWH ELECTRIC WATER HEATER (See note 2 below)
STATE WATER # ES610SOMS, 10 GALLONS, 1650W, 3/4" INLET AND OUTLET, ELECTRIC, 120V, 1 PHASE, MODEL# ETC-2X EXPANSION TANK.

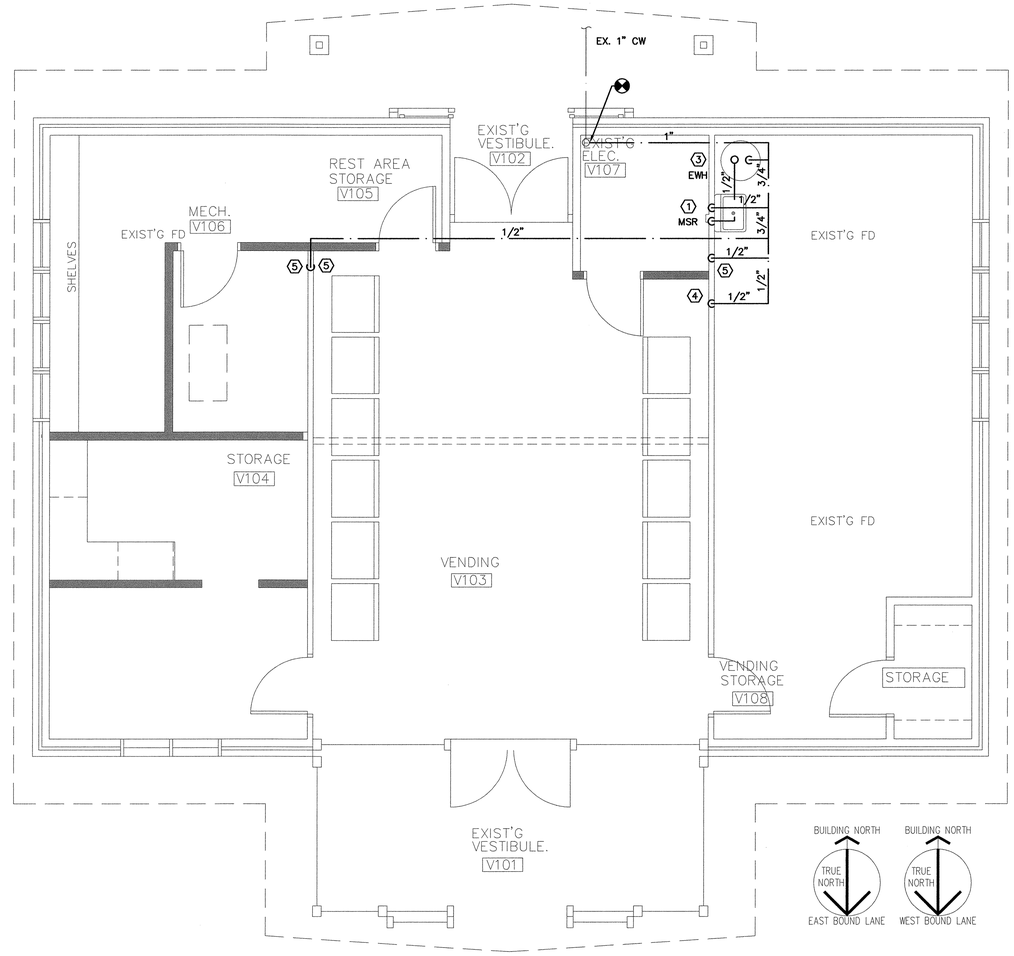
MSR MOP SINK (See note 1 below)
ACORN NO. TDF36-SSC, 36"X36"X12" TERRAZZO SERVICE BASIN WITH 6" DROP FRONT AND STAINLESS STEEL CAPS ON CURBS.
FAUCET: ACORN MODEL KFC CHROME PLATED SERVICE FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK AND 3/4" HOSE THREAD ON SPOUT.
HOSE & HOSE BRACKET: ACORN MODEL KH36 LONG FLEXIBLE 5/8" RUBBER HOSE, CLOTH REINFORCED.

FD FLOOR DRAIN (See note 3 below)
ZURN ZN-415-P. PROVIDE WITH DEEP SEAL P-TRAP, AND TYPE "B" STRAINER.

FD-1 FLOOR DRAIN (See note 3 below)
ZURN ZN-415-P. PROVIDE WITH DEEP SEAL P-TRAP, AND TYPE "I" STRAINER.

APPROVED EQUALS:

1. Or equal by Kohler, Eljer
   Flush Valve: Zurn or Sloan.
   Mop Sink: Zurn, Fiat, Stern Williams or Speakman
   Mop Sink Faucet: Chicago, Symmons or Delta
   Toilet Seat: Church, Centoco or Bemis
2. Or equal by A.O.Smith, Rheem, Lochinvar or Braford White.
3. Or equal by Josam, Wade or JR Smith
4. Or equal by Wade, Nibco, Woodford or J.R. Smith
5. Or equal by Oasis, Sunroc, or Haws
6. Or equal by Neptune, Hersey, Rockwell or Badger.
7. Or equal by Taco, Grundfos or Ingersoll Rand.
8. Or equal by Zurn, J.R. Smith, Josam or American Standard.
9. Or equal by Spirax, Lawler, Leonard or Holby.
10. Or equal by Conbraco, Wilkins, Febco or Ames.

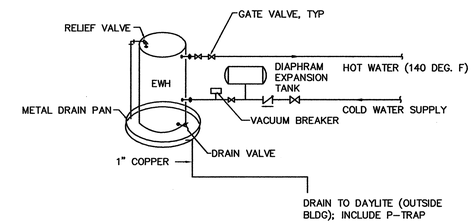


1 VP-2 PLUMBING PLAN-WATER
SCALE: 1/4" = 1'-0"

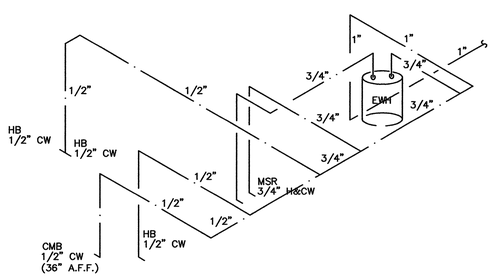
FOR DEMO SEE SHEET VA4

PLUMBING KEY NOTES – WATER

1. 3/4" H&CW DN. TO MSR (HW 140 DEG. F)
2. NOT USED
3. 3/4" CW DN TO EWH
4. 1/2" CW DN TO COFFEE MAKER BOX. MOUNT 36" A.F.F.
5. 1/2" CW DOWN TO HB



2 VP2 DOMESTIC WATER HEATER PIPING SCHEMATIC
NOT TO SCALE



3 VP2 DOMESTIC WATER RISER
NOT TO SCALE

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
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DRAWING TITLE:

DRAWN BY: M. WILLIAMS CHECKED BY: . ISSUE DATE: 27 OCT 09

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SHEET NO. VP2 OF 2

SPLIT SYSTEM HEAT PUMP SCHEDULE

DESIGNATION	MANUFACTURER	INDOOR UNIT	OUTDOOR UNIT	FAN DATA			COOLING CAPACITY					HEATING CAPACITY		AUX. ELECTRICAL HEAT CAPACITY		ELECTRICAL DATA				
																MCA		MOCP		VOLTAGE
				CFM	E.S.P.	HP	TOTAL MBH	SENS. MBH	EAT (°F) DB/WB	AMBIENT (°F)	SEER	MBH	COP	TOTAL KW	NO. OF STAGES	AHU	CU	AHU	CU	
AHU-1/CU-1	TRANE	2TEC3F48*	2TWB3048**	1600	0.3	1/2	45.5	32.8	80/67	95	13	43.5	3.5	9.6	1	53	25	60	40	240/1ø

REMARKS:
1. PROVIDE PROGRAMMABLE THERMOSTAT.
2. PROVIDE SINGLE POINT ELECTRICAL CONNECTION.
3. PROVIDE SIDE RETURN UNIT STAND FOR BOTTOM RETURN. (SUPPORTING AIR HANDLING UNIT WITH DUCT IS NOT ACCEPTABLE.)
4. PROVIDE VERTICAL AIR HANDLER UNIT WITH BOTTOM RETURN AND FILTER RACK.
5. PROVIDE CONCRETE EQUIPMENT PAD FOR OUTSIDE CONDINSING UNIT (SIZE PER EQUIPMENT MANUF. RECOMENDATIONS).

* OTHER ACCEPTABLE MANUFACTURERS/MODELS: CARRIER: FX4BNF048
YORK/AHP48C

** OTHER ACCEPTABLE MANUFACTURERS/MODELS: CARRIER: 25HBA348
YORK/E1D048S06

OUTSIDE AIR CALCULATION
DUCTED OUTSIDE AIR NOT REQUIRED.
BUILDING MEETS REQUIREMENT FOR NATURAL VENTILATION.

AIR DISTRIBUTION SCHEDULE

DESIGNATION	MANUFACTURER – MODEL NO.	TYPE	PANEL SIZE	NECK SIZE	MAX CFM	MAX NC	REMARKS
A	PRICE – ASCD CARNES – SFAB METALAIRE – 5800 AL	CEILING SUPPLY	12 x 12	8"ø	200	30	GYP. CEILING
B	PRICE – ASCD CARNES – SFAB METALAIRE – 5800 AL	CEILING SUPPLY	24 x 24	10"ø	400	30	GYP. CEILING
C	PRICE – FDGR CARNES – SPRB224 METALAIR – 7300 R	RETURN GRILLE	16 x 16	8"ø	200	30	GYP. CEILING
D	PRICE – 610 DAL CARNES – RNDAH METALAIRE – H4000A-AF-1 OBDA	SUPPLY REGISTER	14 x 10	–	350	30	SIDEWALL
E	PRICE – 630 CARNES – RAAAH METALAIRE – RHE-1	RETURN GRILLE	26 x 18	–	1450	30	GYP. CEILING

DUCTLESS SPLIT SYSTEM HEAT PUMP SCHEDULE

DESIGNATION	MANUF.	MODEL NO.	CFM	COOLING CAPACITY		HEATING CAPACITY	ELECTRICAL DATA					
				TOTAL BTUH	SEER	TOTAL BTUH	AHU			CU		
							MCA	MOCP	VOLTAGE	MCA	MOCP	VOLTAGE
AHU/CU	* MITSUBISHI	MSZ09UN	297	8800	12	12300	0.5	15	120/1	14	15	208/1

* OTHER ACCEPTABLE MANUFACTURERS/MODELS: SANYO/09KHS71
CARRIER/40MVQ009-3-01 (INDOOR UNIT),38MVQ009-3-01 (OUTDOOR UNIT)

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
METHOD OF COMPLIANCE:

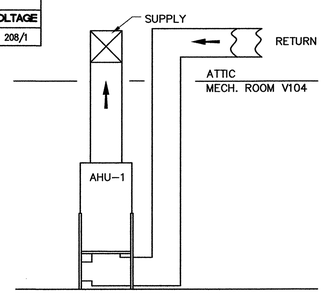
PRESCRIPTIVE ☒ ENERGY COST BUDGET ☐

THERMAL ZONE 8
EXTERIOR DESIGN CONDITIONS
WINTER DRY BULB 10° F
SUMMER DRY BULB 87° F
INTERIOR DESIGN CONDITIONS
WINTER DRY BULB 68 F
SUMMER DRY BULB 75F
RELATIVE HUMIDITY 50%
BUILDING HEATING LOAD 27 MBH
BUILDING COOLING LOAD 5.8 TONS
MECHANICAL SPACE CONDITIONING SYSTEM
SPLIT SYSTEM

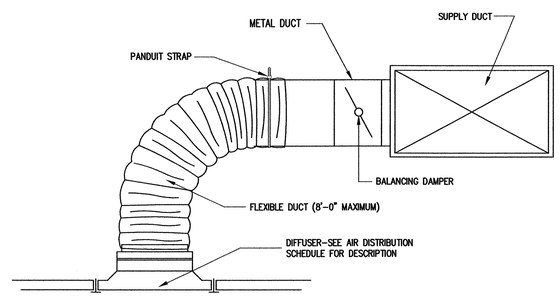
AHU-1/CU-1
DESCRIPTION OF UNIT SPLIT SYSTEM HEAT PUMP
HEATING EFFICIENCY COP = 3.5
COOLING EFFICIENCY SEER = 13.0
HEAT OUTPUT OF UNIT 43.5 MBH
COOLING OUTPUT OF UNIT 45.5 MBH

LIST EQUIPMENT EFFICIENCIES
EFFICIENCIES ARE LISTED ON EQUIPMENT SCHEDULES

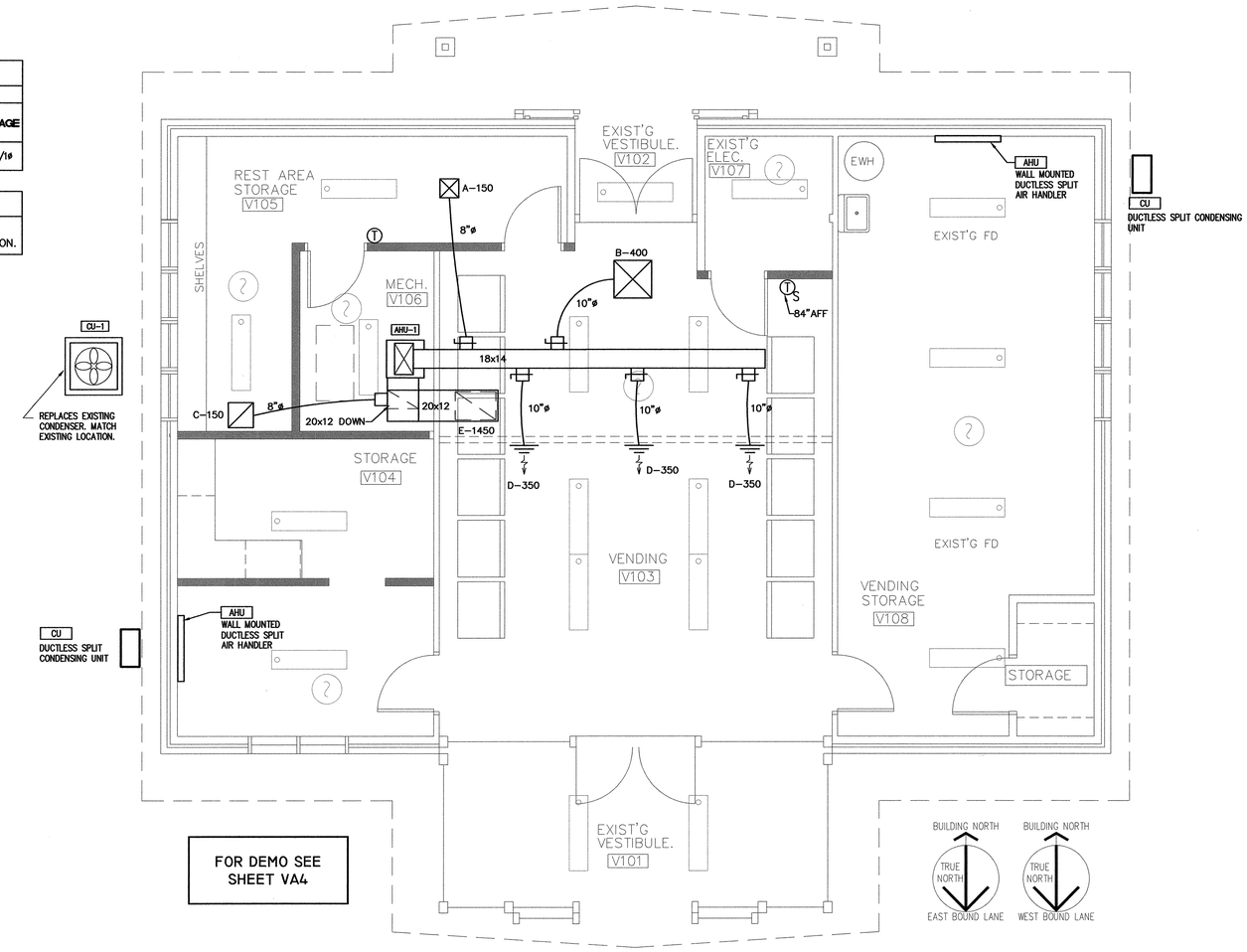
EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS)
MOTORS USED IN THIS PROJECT ARE INCLUDED
IN THE EFFICIENCY RATING OF THE UNITS



3 / VM1 AHU-I DETAIL
SCALE: NTS



2 / VM1 DIFFUSER DETAIL
SCALE: NTS



FOR DEMO SEE SHEET VA4

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

GENERAL NOTES

1. PROVIDE LOCKING COVER FOR THERMOSTAT.
2. GENERAL NOTES AND DUCT CONSTRUCTION DETAILS ON DRAWINGS M1 AND M2 APPLY TO THIS DRAWING ALSO.
3. ROUTE SUPPLY, EXHAUST, AND RETURN DUCTS IN ATTIC.
4. ROUTE CONDENSATE TO FLOOR DRAIN IN MECH. RM. USE COPPER PIPE (1" MIN.)

LEGEND - DUCTWORK/ACCESSORIES	
☒	SUPPLY DIFFUSER
⧄	RETURN GRILLE
⊏	LOCKING MANUAL BALANCING DAMPER
Ⓣ	THERMOSTAT
$Ⓣ_S$	REMOTE TEMPERATURE SENSOR

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SEAL: NORTH CAROLINA PROFESSIONAL SEAL 16343 ENGINEER RICHARD R. KEIL

PROJECT:
I-40 REST AREA
CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:
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DRAWING TITLE:

DRAWN BY: R. KEIL CHECKED BY: R. KEIL ISSUE DATE: 27 OCT 09

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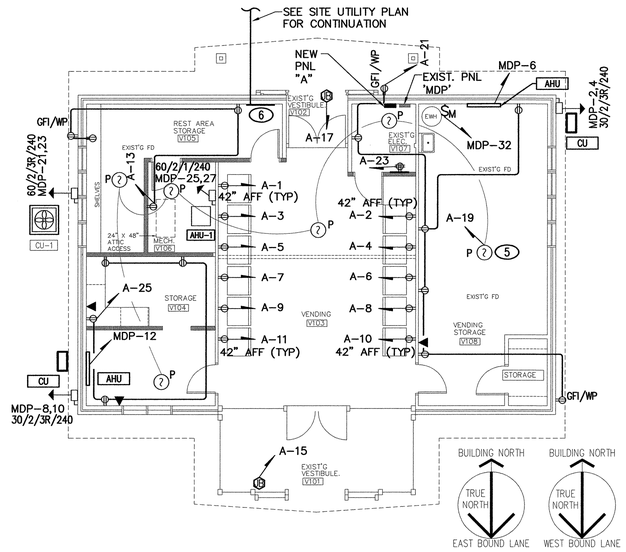
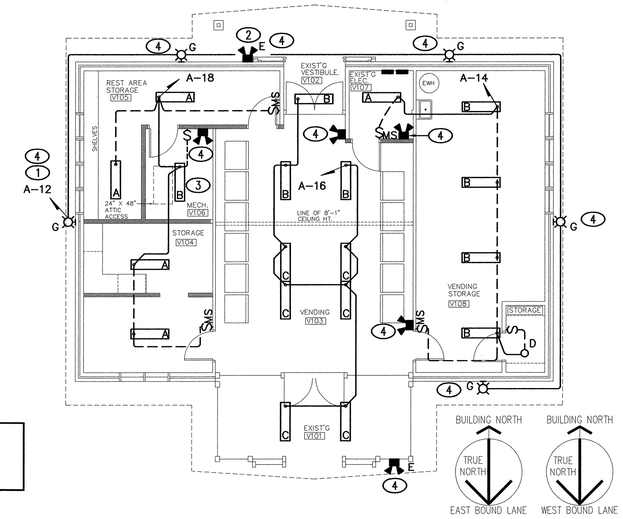
SHEET NO. VMI OF 1



2 / VE-1 POWER PLAN- RENOVATION TO EXIST. VENDING BLDG.

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

FOR DEMO SEE SHEET VA4



1 / VE-1 LIGHTING PLAN- RENOVATION TO EXIST. VENDING BLDG.

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

ELECTRICAL NOTES

1. SWITCH WITH PHOTO CELL.
2. WIRE EXTERIOR EMERGENCY FIXTURE TO EXTERIOR LIGHTING CIRCUIT, TYP.
3. COORDINATE FIXTURE LOCATIONS WITH EQUIPMENT PLACEMENT.
4. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECTURAL PLANS. SEE DRAWING VA2 ELEVATIONS FOR 'G' LOCATIONS AND CAPPING.
5. COORDINATE LOCATION OF SMOKE DETECTORS WITH MECHANICAL PLANS SO POSITION IS 3' FROM SUPPLY DIFFUSERS AND GRILLES.
6. 4X4X3/4" FIRE RATED TELEPHONE EQUIPMENT BOARD.

LOAD SERVED	VA PER PHASE A	VA PER PHASE B	CKT. BRKR.	CKT. NO.	NEUTRAL A B	CKT. NO.	CKT. BRKR.	VA PER PHASE A	VA PER PHASE B	LOAD SERVED
VENDING	500		*20*	1		2	*20*	500		VENDING
VENDING		500	*20*	3		4	*20*		500	VENDING
VENDING	500		*20*	5		6	*20*	500		VENDING
VENDING		500	*20*	7		8	*20*		500	VENDING
VENDING	500		*20*	9		10	*20*	500		VENDING
VENDING		500	*20*	11		12	20		572	LTS
RECEPT	720		20	13		14	20	320		LTS
EXIST. AUTO. DOOR, GFI, FRONT		322	20	15		16	20		448	LTS
EXIST. AUTO. DOOR, GFI, REAR	322		20	17		18	20	320		LTS
SMOKE DETECTORS (BREAKER LOCK)		100	20	19		20	.	.	.	.
RECEPT	1260		20	21		22	.	.		.
TELEPHONE EQUIP.		500	20	23		24	.		.	.
RECEPT	720		20	25		26	.	.		.
.		.	.	27		28	.		.	.
.	.		.	29		30	.	.		.
.		.	.	31		32	.		.	.
.	.		.	33		34	.	.		.
.		.	.	35		36	.		.	.
.	.		.	37		38	.	.		.
.		.	.	39		40	.		.	.
.	.		.	41		42	.	.		.
	4522	2422	TOTAL VA PER PHASE					2140	2020	

C/B TEMP. 75° C. RATING 120/240 V 1 PH 3 W

MOUNTING SURFACE GROUND BUS [X] YES [ ] NO

MAIN CIRCUIT BREAKER [ ] YES [X] NO RATING 100

SERVICE ENTR. RATED [ ] YES [X] NO BUS 100

LUG 100

MINIMUM AIC (K AMPS) 10 SN 100

① DEMAND FACTORS PER NEC 220, PART B.
② LARGEST OF: NEC TABLE 220-3(a) OR CONNECTED LOAD.
③ NEC TABLE 220-20.
④ NEC 220-15.
⑤ NEC 220-12, 200 VA/LINEAR FT.
* NON-CONCIDENT LOADS, LARGEST OF THE TWO LOADS.

NEW PANEL "A" (VENDING BLDG.)

LOAD TYPE		EXIST.	KVA NEW	KVA TOTAL	NEC DEM. FACTOR ①	KVA DEMAND
GENERAL LIGHTING ②		.	1.6	1.6	125%	2.1
GENERAL USE RECEPTACLES		.	2.7	2.7	≤10KVA@100%	2.7
					>10KVA@50%	–
MOTORS AND EQUIPMENT	LARGEST	.	0.5	0.5	125%	0.6
	ALL OTHERS	.	6.2	6.2	100%	6.2
WATER HEATERS		.	.	.	100%	.
KITCHEN EQUIPMENT ③		.	.	.	100%	.
FIX. ELEC. SPACE HEAT. ④		.	.	.	100%	.
SHOW WINDOW LIGHTS ⑤		.	.	.	125%	.
SIGN		.	.	.	125%	.
EXISTING EXTERIOR LIGHTS		.	.	.	125%	.
PANEL/FEEDER (TOTAL KVA)						12
(TOTAL KVA) X 1000 / VOLTS = TOTAL AMPS						50

* * GFI BREAKER

FIXTURE SCHEDULE

MARK	DESCRIPTION	MFG. & CATALOG #	EQUALS	VOLTAGE	LAMP	REMARKS	WATTS
A	TURRENT INDUSTRIAL	COLUMBIA CSR4-232-*-EU-CSRWG4	HOLOPHANE HSM SERIES LEGION 2600 SERIES	120 V	2-32W T8	WITH WIRE GUARD & REFLECTOR	64
B	1x4 SURFACE MOUNT	ALERA ME2T8 0/100 SM-LP	LITECONTROL LC94 SERIES DAYOLITE AD3510-DI SERIES		2-32W T8	.	64
C	SUSPENDED FLUORESCENT	ALERA ALS-2T8*/*-CM*-LD-EU-MW	LITECONTROL LC94 SERIES DAYOLITE AD3510-DI SERIES		2-32W T8	.	64
D	6" RECESSED CAN	PRESCOLITE CFR6126EB-ST372A1	KIRLIN RR80602 SERIES KURT VERSEN P632 SERIES		1-26W CF	. ①	26
E	NOT USED	.	.		.	.	.
F	8"- 2 LAMP RECESSED CAN W/LENS	PRESCOLITE CFR826UEB-ST492A	KIRLIN RR80907 KURT VERSEN P642 SERIES		2-26W CF	.	52
G	WALL SCONCE	LUMINAIRE SPC818***-2PLC26-***-OP-BRZ-WET	RAVEN SERIES AMERICANA SERIES		2-26W CF	. ①	52
H	NOT USED	.	.		.	.	.

NOTES:
1. FIXTURES & BALLAST MUST BE REMOVABLE FROM INACCESSIBLE CEILING.

	EMERGENCY LIGHT	EU-MR-3R	LUNA SERIES NEMA SERIES	120 V		WHITE BODY	
E	EMERGENCY LIGHT EXTERIOR	DUAL LITE PGZ-HTR	MULE MAKO-3-CW HIGH LITES PLURALUX SERIES			.	
	NOT USED	.	.			.	

LIGHT FIXTURE NOTES

① ALL COMPACT FLUORESCENT FIXTURES SHALL HAVE INTERCHANGEABLE 26 WATT LAMPS.

PROJECT:

I-40 REST AREA

CATAWBA COUNTY NORTH CAROLINA

ARCHITECT/ENGINEERS:

FACILITIES DESIGN

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SEAL: NORTH CAROLINA PROFESSIONAL SEAL 7911 ENGINEER JOEL M. HOBBY 10/23/09

TIP. PROJ. NO.	WBS. NO.	CONTRACT ID NO.	FEDERAL- AID NO.
K-4907	39893.3.ST1	C202172	STM-040-2(146)117

SHEET NO. VEI OF 1