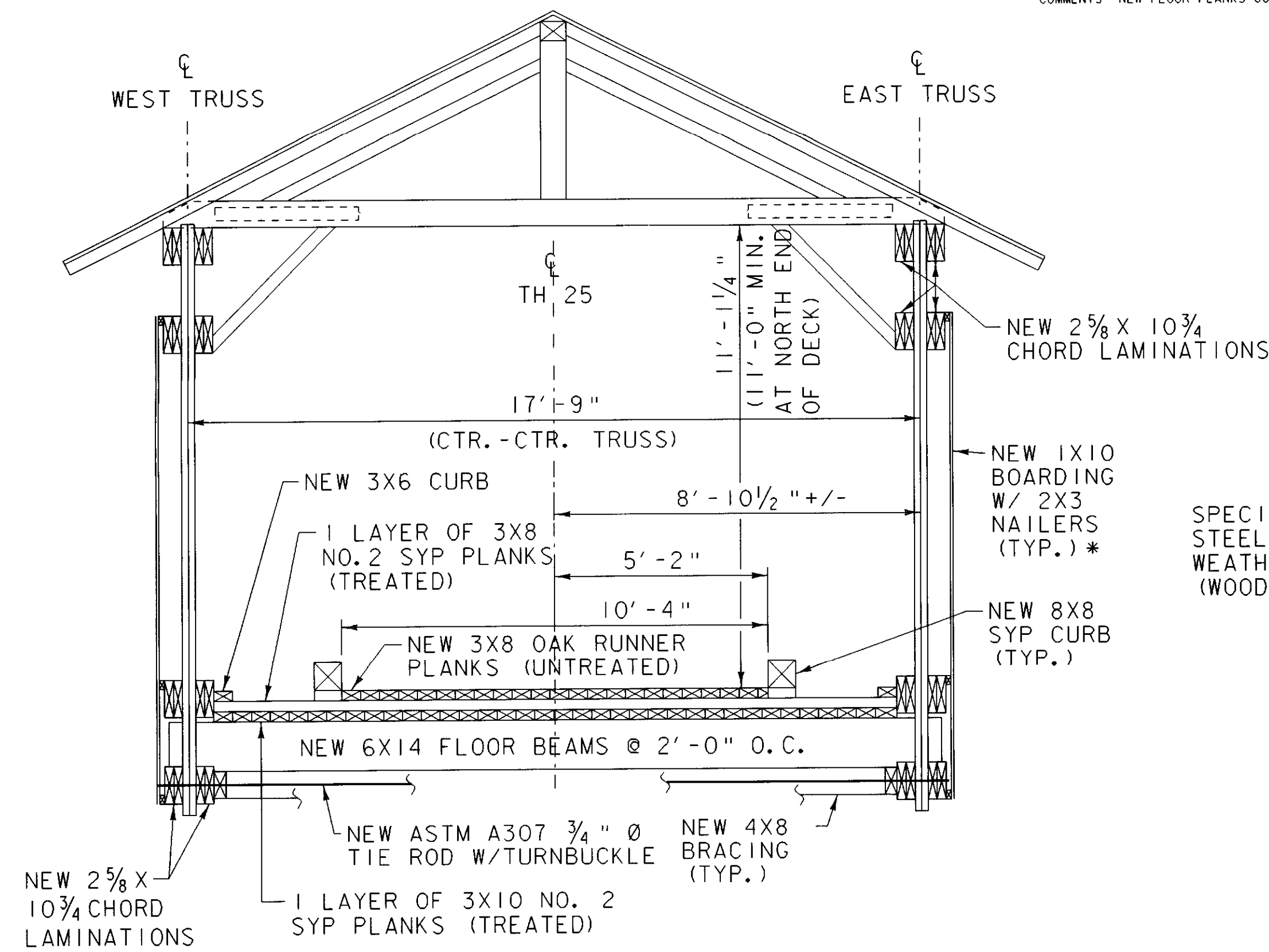


EXISTING CROSS SECTION
SCALE: 3/8" = 1'-0"



NEW CROSS SECTION**
SCALE: 3/8" = 1'-0"

* NON-STRUCTURAL LUMBER - UNTREATED: FULL LENGTH SPRUCE-PINE-FIR BOARDS AND 8'-0" (MIN) LENGTH NAILERS: NO. 3 COMMON BOARDS SHALL BE USED FOR SIDING, PORTALS AND END RETURNS. NO. 2 SPRUCE-PINE-FIR LUMBER SHALL BE USED FOR THE NAILERS.

** FOR FURTHER SUPERSTRUCTURE WORK DETAILS, SEE SHEETS 16-19

TRAFFIC DATA (EST.)

YEAR	ADT	DHV	% D	% T	ADTT
2008	30	10	73	9.0	5
2028	40	15	73	12.0	5

FLEXIBLE ESALs 2008-2028 <50,000 2008-2048 <50,000

ASD LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK				
	H	HS	3S2	6 AXLE 3A. STR.	4A. STR. 5A. SEMI.
INVENTORY	8.9				
POSTED	10.8				
OPERATING	11.8				

COMMENTS: NEW FLOOR PLANKS CONTROL LOAD RATING

VAOT FINAL HYDRAULICS REPORT

Date Sept 2006

TOWN Montgomery COUNTY Franklin
PROJECT # BHO 1448() STREAM West Hill Brook
HIGHWAY # TH 25 STRUCTURE # CB 32

HYDROLOGIC DATA

DRAINAGE AREA 8.8 sq mi
CHARACTER OF TERRAIN Mountainous, forested
STREAM CHARACTERISTICS Sinuous, incised, flashy
NATURE OF STREAMBED Gravel, ledge

PEAK FLOW DATA

Q 2.33 = 500 cfs	Q 50 = 1625 cfs
Q 10 = 1000 cfs	Q 100 = 1925 cfs
Q 25 = 1325 cfs	Q 500 = 2700 cfs

DATE OF FLOOD OF RECORD 1997
ESTIMATED DISCHARGE unknown
WATER SURFACE ELEV unknown
NATURAL STREAM VELOCITY @ Q25 = 27.2 fps
ICE CONDITIONS Moderate to heavy
DEBRIS Light to moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV RAPIDLY? Yes
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE

WATERSHED STORAGE 1% HEADWATERS UNIFORM IMMEDIATELY ABOVE SITE X

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE Single span timber deck covered bridge
YEAR BUILT 1883
CLEAR SPAN(NORMAL TO STREAM) 37'
VERTICAL CLEARANCE ABOVE STREAMBED 13'
WATERWAY OF FULL OPENING 430 sq ft
DISPOSITION OF STRUCTURE Rehabilitation
TYPE OF MATERIAL UNDER SUBSTRUCTURE Gravel, Cobbles, Ledge

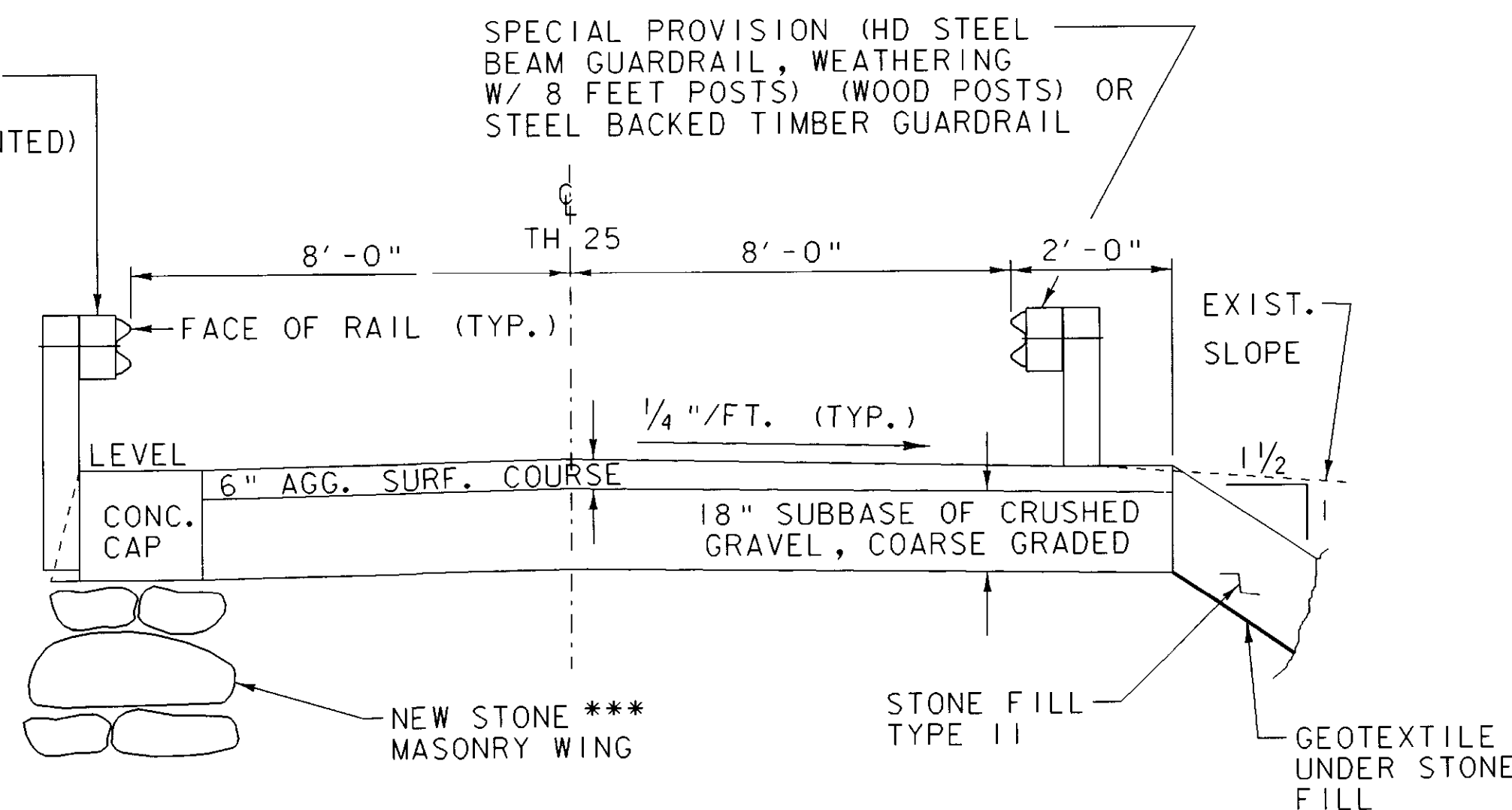
WATER SURFACE ELEVATIONS AT

Q2.33 = 859.8'	VELOCITY = 13.3 fps
Q10 = 861.5'	" 15.9 fps
Q25 = 862.1'	" 16.6 fps
Q50 = 862.5'	" 17.0 fps
Q100 = 862.8'	" 17.2 fps

LONG TERM STREAMBED CHANGES None known

IS THE ROADWAY OVERTOPPED BELOW Q100 No

FREQUENCY N/A
RELIEF ELEVATION 870.4
DISCHARGE OVER ROAD @Q100 No



TYPICAL APPROACH SECTION
SCALE: 3/8" = 1'-0"

*** FOR SUBSTRUCTURE EARTHWORK DETAILS SEE SHEETS 20-22

UPSTREAM STRUCTURE

TOWN	Montgomery	DISTANCE	6500'
HIGHWAY #	TH 11	STRUCTURE #	BR 27
CLEAR SPAN	42'	CLEAR HEIGHT	14'
YEAR BUILT	1981	FULL WATERWAY	550 sq ft
STRUCTURE TYPE	Rolled beam		

DOWNSTREAM STRUCTURE

TOWN	Montgomery	DISTANCE	14,400'
HIGHWAY #	VT 118	STRUCTURE #	B20
CLEAR SPAN	57'	CLEAR HEIGHT	10'
YEAR BUILT	1953	FULL WATERWAY	570 sq ft
STRUCTURE TYPE	3-span rolled beam		

PROPOSED STRUCTURE

STRUCTURE TYPE Existing covered bridge to be rehabilitated

CLEAR SPAN(NORMAL TO STREAM) _____
VERTICAL CLEARANCE ABOVE STREAMBED _____
WATERWAY OF FULL OPENING 430 sq ft

WATER SURFACE ELEVATIONS AT

Q2.33 = 859.8'	VELOCITY = 13.3 fps
Q10 = 861.5'	" 15.9 fps
Q25 = 862.1'	" 16.6 fps
Q50 = 862.5'	" 17.0 fps
Q100 = 862.8'	" 17.2 fps

IS THE ROADWAY OVERTOPPED BELOW Q100 _____

FREQUENCY _____
RELIEF ELEVATION 870.5'
DISCHARGE OVER ROAD @Q100 _____

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE 867.8'
VERTICAL CLEARANCE @ Q25 = 5.7'

SCOUR 2' of contraction scour calculated @Q100 Abutments are on ledge

REQUIRED CHANNEL PROTECTION Stone Fill Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW	18 cfs	DEPTH OR ELEVATION	
ORDINARY LOW WATER	9 cfs	857' at bridge	
ORDINARY HIGH WATER	215 cfs	858' at bridge	

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE N/A
CLEAR SPAN (NORMAL TO STREAM) _____
VERTICAL CLEARANCE ABOVE STREAMBED _____
WATERWAY AREA OF FULL OPENING _____

DESIGN CRITERIA

1 DESIGN LIVE LOAD AASHTO	H-8 (INVENTORY LEVEL)
2 DESIGN SPAN	44 FEET (TRUSS)
3 ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL	5 KSF
ON LEDGE	16 KSF
4 ALLOWABLE LOAD FOR PILING	N/A
TYPE	N/A
ESTIMATED LENGTH	N/A
5 STRUCTURAL STEEL AASHTO M270/M270M GRADE	N/A
6 REINFORCING STEEL GRADE	60
7 CONCRETE, HIGH PERFORMANCE CLASS A fc	N/A
CONCRETE, HIGH PERFORMANCE CLASS B fc	3500 psi
8 DESIGN SOIL UNIT WEIGHT	140 pcf
9 DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL	4 KSF

PROJECT NAME:	MONTGOMERY	PLOT DATE:	21-MAY-2008
PROJECT NUMBER:	BHO 1448 (37)	DRAWN BY:	J. TREI
FILE NAME:	s04j148typ	CHECKED BY:	J. WEAVER
PROJECT LEADER:	J. WEAVER	TYPICAL SECTIONS & PROJECT DATA	SHEET 2 OF 33
DESIGNED BY:	J. WEAVER		