

**ABBREVIATIONS**

AC	ASPHALTIC CONCRETE	MAX	MAXIMUM
AGGR	AGGREGATE	MH	MANHOLE
APPROX	APPROXIMATELY	MIN	MINIMUM
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	MON	MONUMENT
AVG	AVERAGE		
BC	BEGIN CURVE	N	NORTH
BDY	BOUNDARY	NIC	NOT IN CONTRACT
BLDG	BUILDING	N/S	NOT TO SCALE
BM	BENCH MARK		
BOP	BOTTOM OF PIPE	OC	ON CENTER
BRG	BEARING	OD	OUTSIDE DIAMETER
BVC	BEGIN VERTICAL CURVE		
CB	CATCH BASIN	PC	POINT OF CURVE
C	COMMUNICATION	PCT, %	PERCENT
C TO C	CENTER TO CENTER	PI	POINT OF INTERSECTION
CF	CURB FACE	PIV	POST INDICATOR VALVE
CJ	CONSTRUCTION JOINT	PVC	POINT OF INTERSECTION, VERTICAL CURVE
CL	CENTERLINE	POVC	POINT ON VERTICAL CURVE
CL #	CLEAR	PSI	POUND-FORCE PER SQUARE INCH
CLR	CORRUGATED METAL PIPE	PT	POINT OF TANGENCY
CMP	CLEANOUT	PVC	POLYVINYL CHLORIDE
CO	CONDUIT ONLY, CONTRACTION JOINT	PVMT	PAVEMENT
COL	COLUMN	PW	POTABLE WATER
CONC	CONCRETE	R	RADIUS
CONSTR	CONSTRUCTION	RAD	RIDGE
CONT	CONTINUATION	RCP	RADIAL REINFORCED-CONCRETE PIPE
CP	CONCRETE PIPE	RD	ROAD
CPB	COMMUNICATIONS PULLBOX	RD/CR	REDUCER
CS	CARBON STEEL	REF	REFERENCE
CU FT	CUBIC FEET	REINF	REINFORCEMENT
CULV	CULVERT	REQD	REQUIRED
CWR	CHILLED WATER RETURN	REV	REVISION
CWS	CHILLED WATER SUPPLY	RG	ROUGH GRADE
CY	CUBIC YARD	R/W	RIGHT-OF-WAY
Δ	DELTA = ANGLE	S	SLOPE
D	DUCT	SCH, SCHED	SCHEDULE
DEG	DEGREE	SD	STORM DRAIN
DET	DETAIL	SG	SUBGRADE
DI	DUCTILE IRON	SHT	SHEET
DIA, Ø	DIAMETER	SIM	SIMILAR
DL	DRAIN LINE	SQ FT, SF	SQUARE FOOT
DWG	DRAWING	SS	SANITARY SEWER
E	EAST	STA	STATION
EA	ELECTRICAL	STD	STANDARD
EC	ELECTRICAL	STL	STEEL
EDB	ELECTRICAL DUCT BANK	SW	SIDEWALK
EJ	EXPANSION JOINT	T	TANGENT
EL, ELEV	ELEVATION (HEIGHT)	TC	TOP OF CURB
ELEC	ELECTRICAL	TEL	TELEPHONE
ELB	ELBOW	TG	TOP OF GRADE
EMH	ELECTRICAL MANHOLE	TOC	TOP OF CONCRETE
EPB	ELECTRICAL PULLBOX	TOP	TOP
EY	ELECTRICAL VAULT	TOP TOPO	TOPOGRAPHY
EVC	END VERTICAL CURVE	TW	TOP OF WALL
EW	EACH WAY	TYP	TYPICAL
EXIST, EX	EXISTING	UG	UNDERGROUND
FH	FIRE HYDRANT	UNON	UNLESS OTHERWISE NOTED
FIN	FINISH	VC	VERTICAL CURVE
FIN FL	FINISH FLOOR	VCP	VITRIFIED CLAY PIPE
FS	FINISH GRADE FLOOR	VERT	VERTICAL
FL	FLOW LINE	VOL	VOLUME
FLG	FLANGE	W	WEST
FOF	FACE OF FLANGE	W/	WITH
FS	FINISH SURFACE	W/O	WITHOUT
FT	FOOT, FEET	WW	WASTE WATER
FTG	FOOTING	WWF	WELDED WIRE FABRIC
FW	FIRE WATER	XFMR	TRANSFORMER
GALV	GALVANIZED	YD	YARD
GA	GAGE		
GB	GRADE BREAK		
GPM	GALLONS PER MINUTE		
GR	GRADE		
GVL	GRAVEL		
HORIZ	HORIZONTAL		
HP	HIGH POINT		
ID	INSIDE DIAMETER		
IN	INCH		
INCL	INCLUDE		
INTERSECT	INTERSECTION		
INV	INVERT		
JB	JUNCTION BOX		
JT	JOINT		
L	LENGTH		
LA DOTD	STATE OF LOUISIANA, DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT		
LB	POUND		

**LEGEND**

EXISTING	NEW	DESCRIPTION
		CENTERLINE, E
		BUILDING OR STRUCTURE
		FENCE LINE
		ROAD
		ASPHALT CONCRETE PAVING
		MULTIPLE BITUMINOUS SURFACE
		CONCRETE
		RIP-RAP
		DIRECTION OF SHEET FLOW
		FLOWLINE
		CLEANOUT
		DRAIN LINE
		POTABLE WATER
		ELECTRICAL
		ELECTRICAL DUCT BANK
		STORM DRAIN
		SANITARY SEWER
		TELEPHONE
		WATER
		FIRE WATER
		CHILLED WATER SUPPLY
		CHILLED WATER RETURN
		COMMUNICATIONS
		COMMUNICATIONS OR ELECTRICAL PULLBOX
		ELECTRICAL VAULT OR MANHOLE
		FIRE HYDRANT
		GATE VALVE
		MANHOLE
		STORM DRAIN CATCH BASIN
		CULVERT
		CULVERTS W/ FLARED END OUTLET
		POWER POLE
		GUARD POST
		PLUG OR CAP
		INDEX CONTOUR LINE
		INTERMEDIATE CONTOUR LINE
		CUT/FILL SLOPE
		FINISH GRADE ELEVATION
		FINISH SURFACE ELEVATION
		FLOW LINE ELEVATION
		TOP OF CURB
		TOP OF WALL
		INVERT ELEVATION
		ROUGH GRADE ELEVATION
		SECTION LETTER
		DRAWING ON WHICH SECTION IS SHOWN
		DETAIL OR ASSEMBLY NUMBER
		DRAWING ON WHICH DETAIL IS SHOWN
		DETAIL OR ASSEMBLY NUMBER REF
		DRAWINGS FROM WHICH DETAIL IS SHOWN
		DRAWING ON WHICH DETAIL IS DRAWN
		PROFILE NUMBER
		DRAWING ON WHICH PROFILE IS SHOWN
		REVISION CLOUD
		REVISION TRIANGLE & NUMBER ON FACE OF DRAWING

**GENERAL NOTES**

- THE ORIGINAL TOPOGRAPHY WITHIN THE PROPERTY LINES, WAS GENERATED BY COMPUTER METHODS FROM A STAKING SURVEY BY JOHN E. CHANCE & ASSOCIATES, INC., 200 DULLES DRIVE, LAFAYETTE, LOUISIANA, DATED MARCH 8, 1993. TOPOGRAPHY AND PLANNING FEATURES OUTSIDE THE PROPERTY BOUNDARY ARE BASED ON USGS/SATSUMA, LA, QUADRANGLE, DATED 1980. ROUGH GRADING ACTIVITIES BASED ON THE AFORESAID TOPOGRAPHY FOR THE BEAM TUBE ARMS, CORNER STATION AND END STATIONS PADS WAS ACCOMPLISHED BY STRANCO CONSTRUCTION IN ACCORDANCE WITH PLANS PREPARED BY PARSONS AND FORMS THE PRIMARY TOPOGRAPHY SHOWN ON THE FACILITY DRAWINGS.
- GEOTECHNICAL INFORMATION AND SOIL BORING SUMMARIES ARE FROM AN INVESTIGATION BY WOODWARD-CLYDE CONSULTANTS, 2822 ONEAL LANE, BATON ROUGE, LOUISIANA, DATED FEBRUARY, 1995. A COPY OF THIS REPORT IS ON FILE WITH THE CONSTRUCTION MANAGER.
- DRAINAGE CONSIDERATIONS INCORPORATED WITHIN THE DRAWINGS ARE FROM A HYDROLOGIC AND HYDRAULIC REPORT BY GULF ENGINEERS & CONSULTANTS, INC., 9357 INTERLINE AVENUE, BATON ROUGE, LOUISIANA, DATED DECEMBER, 1994. A COPY OF THIS REPORT IS ON FILE WITH THE CONSTRUCTION MANAGER.
- DIMENSIONS, ELEVATIONS AND LOCATION OF EXISTING UTILITIES, STRUCTURES, OR GRADING ARE TO BE VERIFIED PRIOR TO START OF CONSTRUCTION BY CONTRACTOR. ANY DISCREPANCY WITH THE DRAWINGS SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE CONSTRUCTION MANAGER. ANY ADDITIONAL WORK PERFORMED BY THE CONTRACTOR DUE TO HIS FAILURE TO VERIFY AND SO ADVISE, SHALL BE COMPLETELY AT HIS OWN COST AND AT NO COST TO THE INSTITUTE.
- NOTES RELATING TO A SPECIFIC DRAWING WILL BE FOUND ON THE DRAWING FOR WHICH THEY ARE APPLICABLE.
- ALL UNDERGROUND PIPES AND CULVERTS SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION FROM HEAVY MOVING EQUIPMENT.
- THE CONTRACTOR SHALL BE REQUIRED TO APPLY A DUST INHIBITOR ON ALL ROADS, AT THE DIRECTION OF THE CONSTRUCTION MANAGER.
- WASTE AREAS WILL BE DESIGNATED IN THE FIELD BY THE CONSTRUCTION MANAGER.
- STRAIGHT GRADE BETWEEN SPOT ELEVATIONS, UNLESS OTHERWISE SHOWN ON PLANS.
- FINISHED SURFACES SHALL BE SLOPED UNIFORMLY FROM HIGH POINTS, RIDGE LINES, AND AROUND FOUNDATIONS TO FLOW LINES AND AREA DRAINS UNLESS INDICATED OTHERWISE.
- STORM DRAIN, SANITARY SEWER, AND UTILITY LINES SHALL BE SLOPED AT A UNIFORM GRADE BETWEEN INVERT ELEVATIONS.
- SEEDING SHALL NOT BE DONE ON THE FLAT BOTTOM OF DITCHES OR ON CURRENTLY GRASSED AREAS THAT ARE UNDISTURBED BY GRADING OPERATIONS. ALL OTHER AREAS SHALL BE SEEDDED.
- THE STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT, OFFICE OF HIGHWAYS, STANDARD PLANS ARE A PART OF THESE DOCUMENTS TO THE EXTENT REFERENCED.
- THE STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ARE A PART OF THESE DOCUMENTS TO THE EXTENT REFERENCED.

**SPECIFICATION FOR LIMESTONE SURFACING** (LIGO TEMPORARY ACCESS ROAD)

LIMESTONE USED FOR SURFACING OF THE LIGO TEMPORARY ACCESS ROAD SHALL MEET THE FOLLOWING (PER LA. DOTD "STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES", 1992, SECTION 1003 "AGGREGATES FOR SURFACE COURSE", ARTICLE 1003.03(a) "STONE"):

\*THIS MATERIAL SHALL CONSIST OF 100 PERCENT STONE AND SHALL CONFORM TO THE FOLLOWING GRADATIONS:

U.S. SIEVE	PERCENT PASSING
1" / 4"	100
50-100	100
NO. 4	36-65
NO. 40	10-32
NO. 200	3-15

THE FRACTION OF STONE PASSING THE NO. 40 SIEVE SHALL BE NON-PLASTIC.\*

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LIGO-D961259-01-0

NO.	DATE	BY	CHKD	ENGR	PROJ	DESCRIPTION
1	1-15-99	MEI	--	--	MDW	ISSUED FOR AB BUILT

ISSUED FOR CONSTRUCTION	DRAWN	WRB	11-15-96
CHECKED			
ENGINEER			
PROJ			

**AS-BUILT DRAWINGS**

**PARSONS**

100 WEST WALNUT STREET  
PASADENA, CALIFORNIA

**LIGO**

CALIFORNIA INSTITUTE OF TECHNOLOGY  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LASER INTERFEROMETER  
GRAVITATIONAL-WAVE OBSERVATORY  
BEAM TUBE ENCLOSURE - LIVINGSTON, LA

CIVIL  
GENERAL NOTES, LEGEND & ABBREVIATIONS

SCALE: CONTRACT NUMBER: PROJECT NUMBER:  
 SHEET NUMBER: PPI50969 8094  
 REVISION: **LA-C-502**