

PLACE AS TERMINATORS

PLACE RELATIVE TO ELEMENT

WATER MAINS			
ANCHOR	BOP	ANCHOR	BO
CROSSP	BUMPH	CROSS	BUMPH
ELLP	HYDBAP	ELL	HYDBAS
TEEP	HYDBOP	TEE	HYDOB
VALVRP		VALVR	
EXIST/PROPOSED PIPELINES			
SET UP BLUE	SET UP YELLOW	SET UP RED	SET UP PURPLE
BRKCRV	BREAKC	PIPE AROUND CURVE NOTE	CULVERT X-ING DETAIL
INVL	INVR	VALVE BYPASS CONNECT	PIPE CSG END DETAIL
THOLE	TST HOLE DATA NOTE		

EXIST/PROPOSED PIPELINES			
SET UP BLUE	SET UP YELLOW	SET UP RED	SET UP PURPLE
BRKCRV	BREAKC	PIPE AROUND CURVE NOTE	CULVERT X-ING DETAIL
INVL	INVR	VALVE BYPASS CONNECT	PIPE CSG END DETAIL
THOLE	TST HOLE DATA NOTE		

PROFILES			
VALPRP	VALPR	MHPRF	PRODIA
BOPRP	BOPRPE	BREAKP	COPRF
		MHSSPR	
PCELL MACRO			

STANDARD TOOLS			
NEW	OPEN	CLOSE	BACKUP

TEXT			
TEXT W/DOUBLE UNDER-LINE	DOUBLE UNDER-LINE		PLACE TEXT
ABOVE	BELOW	-ON-	
COPY INCREMENT		PLACE VI	PLACE NOTE

MODIFY TEXT			
DISPLAY	MATCH	CHANGE	EDIT
MIRROR TEXT	ASCII/FRACTION		

JUSTIFY		DATA FIELDS	
		SINGLE	AUTO
		LEFT	COPY
		CENTER	COPY INCREMENT
		RIGHT	

VOID LOCKS		
VOID OUTSIDE	VOID OVERLAP	VOID CLIP

PLACE FENCE			
		MOVE	MODIFY
INSIDE	OVERLAP	CLIP	

FENCE COPY			
COPY	MOVE	SCALE COPY	SCALE ORIGINAL
SPIN COPY	SPIN ORIGINAL	ROTATE COPY	ROTATE ORIGINAL
RECT ARRAY	POLAR ARRAY	STRETCH	CELL STRETCH LOCK

FENCE DROP			
DROP COMPLEX	DROP ASSOC	DROP DIMENSION	DROP MLINE

FENCE MIRROR			
VERTICAL ORIGINAL	HOR ORIGINAL	LINE ORIGINAL	
VERTICAL COPY	HOR COPY	LINE COPY	

FENCE CHANGE			
SYM	COLOR	STYLE	WEIGHT
LEVEL	CLASS	LOCK	UNLOCK

MISCELLANEOUS	
CHECK	
FOR SEWER	FLOODIR
ARROWS	ARROWB

TOPOGRAPHY					
BCEC	HWYINT	TREE BASE TREBAS	TREED	POSTC	POSTCP
STCHG	HWYSTA	GROTOP	TREEP	POSTS	POSTSP
GRID	HWYUS	GROTOE	TREE		

SAVE			
SAVE SETTINGS	COMPRESS	SAVE DESIGN	

LINEAR DIMENSION			
DIMENSION ELEMENT	ORDINATE	LABEL LINE	
AXIS ARBITRARY	AXIS TRUE	AXIS VIEW	AXIS DRAWING

ANGULAR DIMENSION			
ANGLE LINES	ANGLE X	ANGLE Y	

RADIAL DIMENSION			
DIAMETER	RADIUS	CENTER MARK	CHANGE DIMENSION

LINES			
LINE	TERM		
CUSTOM LINE STYLES	ACCUDRAW	PLACE SMARTLINE	

ALIGN			
MLINE	CHANGE MLINE	MLINE JOINTS	DROP MLINE
LINE STRING	LINE STRING STREAM	CURVE STRING	CURVE STREAM

MODIFY			
MODIFY	DELETE VERTEX	INSERT VERTEX	PARTIAL DELETE
TRIM			

FILLET			
R=	R=	R=	CHAMFER
FILLET PARABOLA			

MEASURE			
DISTANCE ALONG	DISTANCE CUM	PERP	DISTANCE MIN
RADIUS	ANGLE BETWEEN LINES	AREA DEF	AREA ELEMENT
FLOOD	INTERSECT	UNION	DIFER
AS=1			
SET TP XY	SET TP DELTA	SET TP DIST.	

CHAIN			
	AUTO		AUTO SHAPE

SELECTOR			
SELECT ELEMENT	POWER SELECTOR		TOOL SETTINGS

PATTERNING			
HATCH	CROSS-HATCH	AREA	FENCE
LINEAR SINGLE	LINEAR MULTIPLE	LINEAR TRUNC	LINEAR COMPLETE
MATCH	SHOW PARAMS		

PATTERNING METHOD			
FLOOD	INTERSECT	UNION	DIFER
ELEMENT	POINTS	FENCE	SOLID/HOLE MODE

GROUP		W-SET	
ADD GROUP	DROP GROUP	WSET ADD	WSET COPY
GROUP HOLES	WSET DROP	FENCE WSET ADD	FENCE WSET COPY

POLYGONS			
		ISOMETRIC	BLOCK

CIRCLES			
ISOMETRIC			

ELLIPSE			

ARCS			
ARC RADIUS	ARC ANGLE	ARC AXIS	

POINTS			
ACTIVE POINT			
			ACTIVE POINT POINT

MIRROR ELEMENT			
VERTICAL ORIGINAL	HOR ORIGINAL	LINE ORIGINAL	
VERTICAL COPY	HOR COPY	LINE COPY	

CHANGE			
SYM	COLOR	STYLE	WEIGHT
LEVEL	SOLID/HOLE	AREA FILL	CLASS

UTILITIES							
LIGHT	LIGHTP	GA term	GAPterm	CB	CBP	CO	COP
POLE	POLEP	MHSEW	MHSEWP	DI	DIP	VALVM	VALVMP
JP	JPP	MHMIS	MHMISP	MHSD	MHSDP	BOXM	BOXMP

CLIP BOARD		
CUT	COPY	PASTE

VIEW ATTRIBUTES			
ACS TRIAD	AREA FILL	BACK-GROUND ON/OFF	CONSTR
DIMENSION	DYNAMICS	DATA FIELDS	
FAST CURVES	FAST FONT	REF CLIP	GRID
LEVEL SYM	WEIGHT	PATTERNS	REF BOUNDARY
TEXT	TEXT NODES	FAST CELL	VIEW ATTR

ATTACH PIPELINE CELL LIBRARY	ATTACH SCRATCH CELL LIBRARY
------------------------------	-----------------------------

CELLS			
ACTIVE ABSOLUTE	ACTIVE RELATIVE	INTERACT ABSOLUTE	INTERACT RELATIVE
SELECT ABSOLUTE	SELECT RELATIVE	MATRIX	REPLACE ABSOLUTE
ORIGIN	IDENTIFY		

COPY ELEMENT			
COPY	MOVE	SCALE COPY	SCALE ORIGINAL
MOVE PARALLEL	MOVE PARALLEL KEYIN	COPY PARALLEL	COPY PARALLEL KEYIN
SPIN COPY	SPIN ORIGINAL	ROTATE COPY	ROTATE ORIGINAL
RECT ARRAY	POLAR ARRAY		

DROP			
DROP	DROP LSTRING	DROP TEXT	DROP ASSOC
DROP DIMENSION	DIMENSION ASSOC	LOCK	UNLOCK

MIRROR ELEMENT			
VERTICAL ORIGINAL	HOR ORIGINAL	LINE ORIGINAL	
VERTICAL COPY	HOR COPY	LINE COPY	

CHANGE			
SYM	COLOR	STYLE	WEIGHT
LEVEL	SOLID/HOLE	AREA FILL	CLASS

VIEW			
UPDATE	UPDATE LEFT	UPDATE BOTH	UPDATE RIGHT
UPDATE GRID			
FENCE INSIDE	FENCE OUTSIDE	UP	WINDOW VOLUME
WINDOW AREA			
FIT	LEFT	WINDOW CENTER	RIGHT
FIT ALL			
VIEW OFF	ZOOM IN	DOWN	ZOOM OUT
SAVED VIEWS			
VIEW ON			SWAP
COPY VIEW			
ZOOM UNDO	ZOOM REDO	VIEW ROTATE DIALOG	VIEW ROTATE POINTS
ALIGN VIEWS			
VIEW PREVIOUS	VIEW NEXT		

MIRROR ELEMENT			
VERTICAL ORIGINAL	HOR ORIGINAL	LINE ORIGINAL	
VERTICAL COPY	HOR COPY	LINE COPY	

CHANGE			
SYM	COLOR	STYLE	WEIGHT
LEVEL	SOLID/HOLE	AREA FILL	CLASS

UTILITIES							
LIGHT	LIGHTP	GA term	GAPterm	CB	CBP	CO	COP
POLE	POLEP	MHSEW	MHSEWP	DI	DIP	VALVM	VALVMP
JP	JPP	MHMIS	MHMISP	MHSD	MHSDP	BOXM	BOXMP



PLOT B SHAPE
PLOT G SHAPE
I PLOT

UTILITIES		
KEYIN BROWSER	COMMAND PROMPT	HELP TOPICS
DIGITIZER PARTITION	DIGITIZER SETUP	DEFINE NORTH
LEVEL DISPLAY	LEVEL MANAGER	DESIGN FILE SETTINGS

UNDO X
REDO X
IRASB

EBMUD TOOLS				
CELL TOOLS	CIVIL SITE TOOLS	SCALE ROTATE ELEM	CHANGE TEXT CASE	MATCH PLACE TEXT
STATION TOOLS	STATION NOTES			DELETE DUPLICATE

133 3/4	122 1/2	101 1/4	78 3/4	67 1/2	56 1/4
146 1/4	150	180	210	225	330
157 1/2	168 3/4	191 1/4	202 1/2	213 3/4	236 1/4
33 3/4	22 1/2	11 1/4	348 3/4	337 1/2	326 1/4
34	30	0	330	330	315
33 3/4	22 1/2	11 1/4	348 3/4	337 1/2	326 1/4

VIEW				
UPDATE	UPDATE LEFT	UPDATE BOTH	UPDATE RIGHT	UPDATE GRID
FENCE INSIDE	FENCE OUTSIDE	UP	WINDOW VOLUME	WINDOW AREA
FIT	LEFT	WINDOW CENTER	RIGHT	FIT ALL
VIEW OFF	ZOOM IN	DOWN	ZOOM OUT	SAVED VIEWS
VIEW ON			SWAP	COPY VIEW
ZOOM UNDO	ZOOM REDO	VIEW ROTATE DIALOG	VIEW ROTATE POINTS	ALIGN VIEWS
VIEW PREVIOUS	VIEW NEXT			

BORDERS, N ARROWS, SCALES, ETC.			
G SIZE NORTH ARROW	B SIZE NORTH ARROW	MICROFILM NOTE	
SHEET SHAPE PLAN ONLY	SHEET SHAPE W/ PROFILE	AS-BUILT NOTE	
VICINITY BLOCK FOR COVER SHIT	VICINITY MAP ARROW	DIRECTOR'S SIGNATURE	
SCALE 1:20H, 1:4V	SHEET NUMBER SLASH		
SCALE 1:40H, 1:4V	REVBUG	FILE DOCUMENTATION	
SCALE 1:50H, 1:5V			
GRAPHIC SCALE		ROTATE POINT	

NOTES			
BEFORE YOU DIG NOTE	REFERENCE BLOCK	USGS ELEV DATUM	PROFILE AS PER RECORDER
MATCHLINE TEXT ABOVE	MATCHLINE TEXT BELOW	OAKLAND DATUM	RECORDED BY DATA STAMP
STATION LINE NOTE	CURVE DATA NOTE	ALAMEDA CITY DATUM	OUT OF SERVICE STAMP
PIPE REQUIRED TABLE	RIGHT-OF-WAY NOTE		HI-VOLT WARNING

MicroStation

ACS (AUXILIARY COORDINATES)			
DEFINE ELEMENT	DEFINE POINT	DEFINE VIEW	ATTACH
ROTATE ABS	ROTATE RELATIVE	MOVE	
DISPLAY ACS	SAVE ACS	SHOW ACS	DEFINE ACS

NAD	
NAD27	NAD83

LOCKS			
ASSOC	ACS	ANGLE	AXIS
ACTIVE FILL	BORE SITE	GRAPHIC GROUP	GRID
ISOMETRIC	LEVEL	SCALE	SELECT
SHOW LOCKS	TEXT NODE	UNIT	

SNAPS			
PERP END	TANGENT END	INTERSECT	PARALLEL
THROUGH POINT	PERP	TANGENT	BISECTOR
KEYPOINT	PROJECT	CENTER	ORIGIN

REFERENCE FILES			
ATTACH	DETACH	MOVE	SCALE
CLIP	CLIP MASK	CLIP BACK	CLIP FRONT
RELOAD	ROTATE	MIRROR HOR	MIRROR VERTICAL
LEVEL ON	LEVEL OFF	SNAP ON	SNAP OFF
LOCATE ON	LOCATE OFF	DISPLAY ON	DISPLAY OFF

BORDERS, N ARROWS, SCALES, ETC.			
G SIZE NORTH ARROW	B SIZE NORTH ARROW	MICROFILM NOTE	
SHEET SHAPE PLAN ONLY	SHEET SHAPE W/ PROFILE	AS-BUILT NOTE	
VICINITY BLOCK FOR COVER SHIT	VICINITY MAP ARROW	DIRECTOR'S SIGNATURE	
SCALE 1:20H, 1:4V	SHEET NUMBER SLASH		
SCALE 1:40H, 1:4V	REVBUG	FILE DOCUMENTATION	
SCALE 1:50H, 1:5V			
GRAPHIC SCALE		ROTATE POINT	

NOTES			
BEFORE YOU DIG NOTE	REFERENCE BLOCK	USGS ELEV DATUM	PROFILE AS PER RECORDER
MATCHLINE TEXT ABOVE	MATCHLINE TEXT BELOW	OAKLAND DATUM	RECORDED BY DATA STAMP
STATION LINE NOTE	CURVE DATA NOTE	ALAMEDA CITY DATUM	OUT OF SERVICE STAMP
PIPE REQUIRED TABLE	RIGHT-OF-WAY NOTE		HI-VOLT WARNING

NOTES			
BEFORE YOU DIG NOTE	REFERENCE BLOCK	USGS ELEV DATUM	PROFILE AS PER RECORDER
MATCHLINE TEXT ABOVE	MATCHLINE TEXT BELOW	OAKLAND DATUM	RECORDED BY DATA STAMP
STATION LINE NOTE	CURVE DATA NOTE	ALAMEDA CITY DATUM	OUT OF SERVICE STAMP
PIPE REQUIRED TABLE	RIGHT-OF-WAY NOTE		HI-VOLT WARNING

NOTES			
BEFORE YOU DIG NOTE	REFERENCE BLOCK	USGS ELEV DATUM	PROFILE AS PER RECORDER
MATCHLINE TEXT ABOVE	MATCHLINE TEXT BELOW	OAKLAND DATUM	RECORDED BY DATA STAMP
STATION LINE NOTE	CURVE DATA NOTE	ALAMEDA CITY DATUM	OUT OF SERVICE STAMP
PIPE REQUIRED TABLE	RIGHT-OF-WAY NOTE		HI-VOLT WARNING

NOTES			
BEFORE YOU DIG NOTE	REFERENCE BLOCK	USGS ELEV DATUM	PROFILE AS PER RECORDER
MATCHLINE TEXT ABOVE	MATCHLINE TEXT BELOW	OAKLAND DATUM	RECORDED BY DATA STAMP
STATION LINE NOTE	CURVE DATA NOTE	ALAMEDA CITY DATUM	OUT OF SERVICE STAMP
PIPE REQUIRED TABLE	RIGHT-OF-WAY NOTE		HI-VOLT WARNING

ENTER POINT #2

EXIT