

7\$%/( 2) &217(176

,QWURGXFWRQ  
0DQXDO )RUPDW  
(OHFWULFDO 5HVHUYDWLRQV

(TXLSPHQW 5HVHUYDWLRQV

3DWKZD\ 5HVHUYDWLRQV

\$GYDQFHG 5HVHUYDWLRQV

5HVHUYDWLRQ \$QDO\VLV

&ODVK

6HFWLRQLQJ

'LVWDQFH

'\$QQRWDWRQV

'\$QQRWDWHG 9LHZV

3UREOHPV

3UREOHP

3UREOHP

\$SSHQGL[ \$

,QIUDVWUXFWXUH 3DUW ,QIUDVWUXFWXU

,QIUDVWUXFWXUH 3DUW ,QIUDVWUXFWXU

'LJLWDO 0RFNXS \*HQHUDO

'LJLWDO 0RFNXS '08 1DYLJDWRU

'LJLWDO 0RFNXS '08 0DUNHU

'LJLWDO 0RFNXS '08 6HFWLRQLQJ

'LJLWDO 0RFNXS '08 6SDFH \$QDO\VLV '08 &ODVK

'LJLWDO 0RFNXS '08 6SDFH \$QDO\VLV '08 'LVWDQFH

, Q W U R G X F W L R Q

0DQXDO )RUPDW

,W LV LPSRUWDQW WR XQGHUVWDQW WRV KMH RLWP DWVRM WIKHFPDLOQ  
 7KLV PDQXDO LV GHVLJQHG WR EH XNYHGU DQRQJZZLQW KQHQGLQWRV  
 ORW RI UHGGLQJ DV ZHOO LQ RUGHURWR IXQD\HXHQGHUWHWDQW  
 ERRN ZLOO OLVW VWHSV IRU \RX WQVFWKSDOHWH \DWRRQQIRLWKR  
 \RX KDYH MXVW GRQH DQG ZKDW \RFXWIDUJMHVHIVQDUHDQ\EWB  
 DQG WKH LQIRUPDWLRQ WKDW IROORZWKLIQH WWHVVDISSHBUVR  
*italics* UHIHUV WR D PHVVDJH &\$7,\$ SURYLQHSXWCKGRZLQFQXQXV  
 SRS XS ZLQGRZV DQG RWKHU PHVVDJHV

\$Q H[DPSOH RID VWHS DQG LWV H[SQRUPDWDRQWKH QKQHQZHO  
EH WKHUH

6HOHFW DORFDWLRQ WR7MKH VSHFLWL RV WKKH RWKJHQ HGG SF  
 <RX ZLOO FRQLQXH VSHFLI\LQJ ORFISWRRLQMLQ, WUWKHXWGRDF  
 VLPLODU WR WKH GLDJUDP VKRZQ EHZRZ

\$V \RX FDQ VHH WKH GHVLUHG DFWLRQKDOHQWVDSQHZLWKLWKE  
 LQIRUPDWLRQ IROORZLQJ WKH VWHSKHSDQDQZKZDW\WKDWHV  
 JRLQJ QH[W ,W LV LPSRUWDQW IRUKHXS WR URXDGXVQIGHU VQIRQ  
 &\$7,\$ 9HUVLRQ

\$OVR \RX ZLOO ILQG WKDW WKH H[DWHU VH[VHUEXILVHGVXSIRQH QKH  
 \RX NQRZ KRZ WR GRFHUWDLQ VWHSOLZKLEKHKBYVHEVHQ FIRX  
 QRW TXLWH SLFN XS ZKDW \RX QHHGEGOVRSNQEZHORELDQKHWU  
 UHYLHZ LW VHYHUDO WLPHV EHIRUHPWRQRJRQSWRRXSHRPUH  
 WKURXJK WKH PDQXDO LW H[SHFWRUWKDWDRMDEGHOWBUQRLQ  
 PRUH ZLWK IHZHU VWHSV (YHQWXDORO\$HURRDRUSHHSHRWVOWD  
 ZLWKRXW DQ\ VWHSV



3DWKZD\ 5HVHUYDWLRQV

3DWKZD\ UHVHUYDWLRQV DUH QHFHFMVDV\OIRIUWHQYHKU LRU V  
EHWZHHQ HTXLSPHQW WKDW ZLOOZBH LIQWFMUDOWHGR QW EDQD  
IRU DQ\ W\SH RI SDUW 7KH\ DUH LHEHURXVOL\ QJVHIG WKUE HQH

2SHQ 3DWKZD\ 5HVHUYDWLRQV Pathway Reservation GLUHFWRU\  
7KH PRGHO DSSHUV DV VKRZQ

7KLV PRGHO KDV DOUHDG\ EHHQ VWQHWHDFRO\ \QKNH7 WIKV F  
(TXLSPHQW 5HVHUYDWLRQ H[HUFLVHOV KEXWQRXS DMXZDFRPS  
UHVHUYDWLRQV EHWZHHQ WKH HTXLSPHQW DQG VXSSRUW

%H VXUH WKDW \RX DUH LQ WKH \$VVHPEO\ 'HVLJQ ZRUNE

6HOHFVWZKDLURQ DQ Pathway Reservation IURP WKH WUNH  
Number ZLQGRZ DSSHUV

.H\ LQ\_3 DRUKNWK Part Number DQG VHOHFV

7 KNew Part: Origin Point ZLQGRZ DSSHDUV

6 HONOFWRX ZLOO MXVW XVH WKH JOREDKORQH ZLSQ SRL QWSRIDWY  
LQ WKH VSHFLILFDWLRQ WUHH



'RXEOH VHPOMFGWFKH QW DV VKRZQ DERYHKWR DKFKLOYDWH W  
VZLWFK \RX WR D SDUW OHYHO ZRUKLEHSDFKW ZRXWDLQH WKIHQFRW  
WKH DVVHPEO\

6ZLWFK WR WKH \*HQHUDWLYH 6KXSHOHVEHJQZIRQNEHJH KDPH  
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+LGH WKH UHIHUHQFH <SRODZHOVORQRWKKQHSIGUWKH UHIHUHQFH S

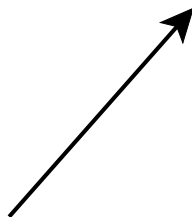


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&UHDWH D VNHWFK RQ WKH IDFH DV VKRZQ EHORZ





'UDZ DQG FRQVWUDLQ D FLUHOHH QW HUK B R Q Q E H R W KH FLU  
FRQVWUDLQHG WR WKH SRLQW

([LW WKH VNHWFK

6HOHF5W E M F R Q <RX PD\ JHW D ZDUQLQJ WHOOLQJ \RX WKD  
SDUWERG\ WR FUHDWH D ~~OKR V R O W K H~~ W X Q H R Z - X V W V H O H F W

6HOHF W KH VNHWFK R P r o m i s e D Q G U F H O H F W R G K H L Q S O W K H W  
Center curve

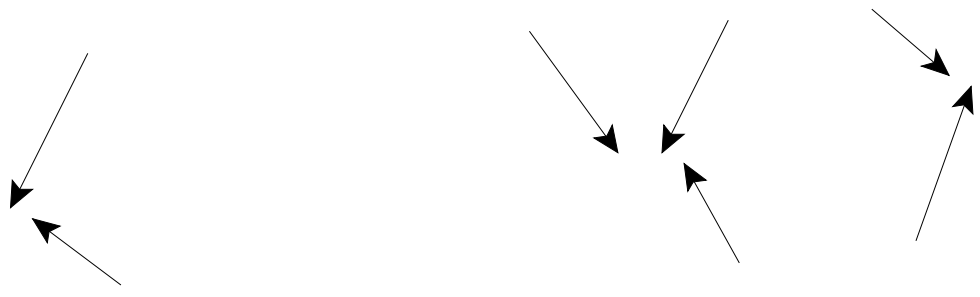
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7KLV ZLOO UHSUHVHQW D SDWKZD\ ~~E H Q W U Y H D W H I L R Q E H L W Q N H~~

'RXEOH V ~~Pathway Reservation~~ LQ WKH VSHFLILFDWLRQ WUHH WR D  
OHYHO

8 V ~~Save Management~~ WR VDYH WKH DVVHPEO\ DQG DOO RI WKH S  
3DWKZD\ 5HVHUYD W Q R R X V G L P H F W R U \

&UHDWH D QHZ SD WWD D V D X O H G W D K M K J O R E D O D V V H P E O \ D [ L V  
 \$FWLY D W H Z W R K F X P H Q W D Q G K L G H W K H U H I H U H Q F H S O D Q H V  
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,W V K R X O G D S S H D U D V V K R Z Q

7KLV WLP H \ R X Z L O O F U H D W H D V X U I D F H W R F U H D W H W K H V R

6 H O H F W L W F I C H R Q 7.3 *Sweep Surface Definition* Z L Q G R Z D S S H D U V

6 H O H F W L W F I C H R Q L Q W K H Z L Q P r o f i l e t y p e R G H I L Q H W K H

& K D Q J S u b t y p e C e n t e r a n d r a d i u s

6 H O H F W W K H V S C e n t e r a n d r a d i u s C G I L Q H W K R E H

6H00KF WKH VXUIDFH VKRXOG DSSH DU DV VKRZQ

6ZLWFK WR WKH 3DUW 'HVLJQ ZRUNEHQFK

6HOHFV WKH 6XUFBHQ 7KH LFRQ LV ORZKLVN G XIQHDFH WKH  
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DSSH DU V

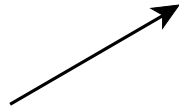
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+LGH WKH KZHHS GHO VKRXOG DSSH DU DV VKRZQ

'RXEOH V Pathway Reservation LQ WKH VSHFLILFDWLRQ WUHH WR U  
OHYHO

&UHDWH D QHZ SDUW W B O H C P S P M K QHU DV EHIRUH

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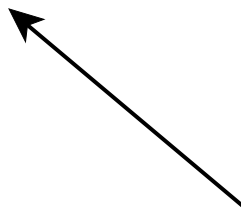
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FRQVWUDLQH GWR WKH SRLQW

([LW WKH VNHWFK

&UHDWH DQRWKHU VNHWFK RQ WKH IDFH VKRZQ EHZRZ





7KH VSOLQH VKRXOG DSSH DU DV VKRZQ

6ZLWFK EDFN WR WKH 3DUW 'HVLJQ ZRUNEHQFK

6HOHFW WKH 6HFWRU RQ 6RORZ-*sections Solid Definition* ZLQGRZ  
DSSH DU V

6HOHFW WKH FLUFOH WR 0NHLO RYHWKWKH DU V WZSIJR SLRLO W L Q J  
LQ WKH GLUHFWLRQ VKRZQ EHZ

6HOHFW WKH FLUFXODU HGJH DV VKRZQH WFKH LQHH WKH  
Point DUURZ PDWFKHV WKH SLFWXUH

6HOHFW HDFK RI WKH QH[W WKUHLQ FHV FRXODUK HIGZHV \M R  
VXSSRUWV WKDW WKH VSOLQH LQSDY WKH WKRZV JKUH DOO  
SRLQWLQJ WKH VDPH GLUHFWRQ

6HOHFW WKH HORQJDWHG KROH VNHWF R XDRV GWHLEQMLW Q M  
\$JDLQ EH VXUH WKH DUURZ LV SRLQWLQJ DV VKRZQ

6HOHFW WKH LQ WKH ZLQGRZ

6HOHFW WKH VSOLQH LQSDY WKH WKRZV JKUH DOO

6HOHFVW DE DQG FSKDQJWR RREtd 6HOHFVW H  
SDWK VKRXOG DSSHDU DV VKRZQ

'RXEOH V Pathway Reservation LQ WKH VSHFLILFDWLRQ WUHH WR DFV  
<RX PD\ ZDQW WR VDYH \RXU DVVHPEO\ DW WKLV SRLQW DV Z

&UHDWH DQRWKHU SDUW\_LQ WKH DVVHPEO\ FDOOHG 3DWK

\$FWLYDWH WKH SDUW DQG KLGH WKH UHIHUHQFH SODQH

6ZLWFK WR WKH \*HQHUDWLYH 6KDSH 'HVLJQ ZRUNEHQFK

6HOHFVW LQVHWHQFH Point Definition ZLQGRZ DSSHDUV

&KDQJ Point type WCR curve

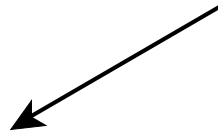
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6HOHFVW Reference Point



0DNH VXDistanKdWurveLV VHOHFWHLeDQGRVHW WKLQFKHV DQ  
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6HOHFVS OLIQH

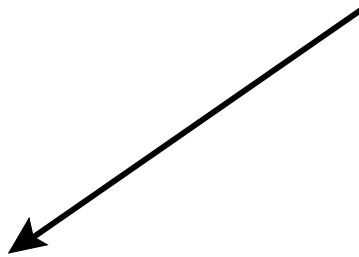
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& U H D W H D L Q F K U D G L X V F L U F X O H Q W V Z H F I S U X V K Q U D W K H V S  
V K R X O G D S S H D U D V V K R Z Q

6 Z L W F K W R W K H 3 D U W ' H V L J Q Z R U N E H Q F K D Q G F O R V H W K H  
+ L G H W K H V Z H H S U N E H V D F

'RXEOH V Pathway Reservation LQ WKH VSHFLILFDWLRQ WUHH WR D  
7KH PRGHO VKRXOG DSSHU DV VKRZQ

'RXEOH VHOFFSEW3R QWKHJDLQW LQ WKH VSHFLILFDWLRQ V



7 K Constraint Definition ZLQGRZ DSSHDUV

&KDQJN W KMR EH DQG VHOHFW

8SGDWH WKH DVVHPEO\ LI LW GRHWORW XSDWKH D XWSPDU  
PRYHV FORVHU WR WKH PLGGOH RIXW WHD%DRUHGDLQGODOO RI WK

& KDQJ Offset 21 F R Q V U D L Q W W R R K D Q F K D V 8 S G D W H K M K H D V  
PRGHO VKRXOG DSSH DU DV VKRZQ

\$OO RI WKH SDWKV DUH OLQNHG WR WRKWKHT XLKSRHQW IDQGX  
RI WKRVH PRGHOV DUH PRYHG

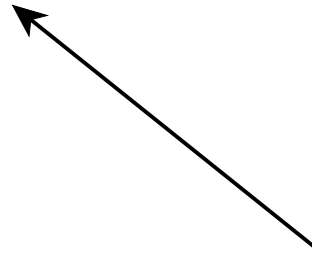
6DYH DQG FORVH WKH GRFXPHQW

' \$QQRWDWLRQV

% \ FUHDWLQJ D ' DQQRWDWLRQ \ RW ZUHO QH DWGLQMDIS QHDDQ  
UHPRYHG ZKHQ WKH PRGHO LV URWDWLDW LRRQ JIRW PXMCHI XG IIR  
LGHQWLI \ LQJ VSHFLILF SDUWV LQ X ZDDQWHWRV SODDEH \ LQIRZ  
PDUNXSV RQ WKH GUDZLQJV \RX VKRXOG XVH ' DQQRWDW

6HOHFW \$QQRWDWLRQ 1R ZLQGRZV ZLOO GLVSOD \ XQWLO \ F

6HOHFW WKH HQG RI WKH SDWKZD \ DV VKRZQ EHZRZ



2QFH \RX PDNH \RX Annotations ZLQGRZ DSSHDU DORQJ ZLWK  
Properties ZLQGRZ

.H \ 9HULI \ YROXEPG TWK MLXHS X FDQ NH \ LQ DQ \ DPRXQW RI V  
GHVLUH

7KH WZR ERTH Properties KHQGRZ ZLOO DOORZ \RX WR FKDQJH WKH  
 RI WKH IRQW 7KH Properties ZLIQG WK ZLOO DOORZ \RX WR DGG V  
 ZLWK \RXU WH[W 7KH DYDLODEOH V\PEROV DUH VKRZQ EHOR

6HOAptW 1RWLFH WKH JUHHQ GRW WKDW DSWHDC W KHWSK WK H V  
 7KLV LV WKH DQFKRU IRU WKH WH[W

7KHUH DUH RWKHU IHDWXUHV WKDW\@XHQ BDNHRLW RQ  
WKH PRGHO

8VLQJ WKH WKLUG PRXVH EXWRQ VHOHFW RQ WKH WH[V



' \$QQRWDWHG 9LHZV

,Q PRVW LQVWDQFHV ZKHQ DQQRWBQIXRQVDOHLVHGFMUHG D  
D ' DQQRWDWLRQ \RX FDQ FUHDWQHPRUFKUYKHDQ MUXWRZ WHHWH  
SLFWXUHV RU DXGLR FRPPHQWV FDQNEH \WCRGDI G' VDRQVRKWDWLRQ  
WKH IDFW WKDW ZKHQ WKH PRGHOUW U, R\WIDWEHGF \XVHDIQIWWL  
\RX QHHG WR PDNH VXUH WKDW WKHQPRGHOUWLV 'LQQRVLDWRQ  
3RVLWLRQ WKH PRGHOUWZLOOVKHZWKH SRVLWLRQ IRU WKH ' D

6HOHFWQVRKWDWHLGFRQHZ\$IWHU VHOHFWLQJ WKLVLFRQ D ' D  
GHILQH 7KHUH ZLOO DOVR EH HG DQQRWDWLRQ DO VHW RI WRR  
WROEDU

&UHDWHV D OLQH

\$OORZV \RX WR IUHHKDQG DURXQG WKH ' DQQRWDWLRQ

&UHDWHV D FLUFOH

&UHDWHV DQ DUURZ RQ WKH DQQRWDWLRQ

&UHDWHV D VTXDUH

\$OORZV \RX WR NH\ WH[W RQ WKH DQQRWDWLRQ

\$OORZV \RX WR LQVHUW YDULRXV SDEWVXUH IRUPDWV RQ V

,QVHUWV DQ DXGLR PDUNHU RQ WKH DQQRWDWLRQ





\* R DKHDG DQG GUDZ DQRWKHU DUURZ DQG D ER[ DV VKR

6HOHFW WKH