



**SEWER MAIN CONSTRUCTION SEQUENCING**

THE CONTRACTOR SHALL INSTALL, TEST, AND CONNECT THE SEWER MAIN IN THE FOLLOWING SEQUENCE. ALTERNATE SEQUENCING MAY BE PROPOSED BY THE CONTRACTOR. ALTERNATE SEQUENCING SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER. BYPASS PUMPING SHALL PUMP EXISTING FLOWS EITHER AROUND THE AREA UNDER CONSTRUCTION OR TO THE EXISTING LIFT STATION AT THE NORTHWEST QUADRANT OF THE HIGHWAY 16/CATRON BOULEVARD INTERSECTION. THIS SEQUENCE MAY BE SUBJECT TO CHANGE DEPENDING UPON THE ROADWAY CONSTRUCTION SEQUENCE.

1. CONNECT TO EXISTING STUB AT THE EXISTING MANHOLE AT STA. 29+86.27. INSTALL NEW 16" RESTRAINED JOINT SEWER IN CASING NORTH ACROSS CATRON BOULEVARD TO NEW MANHOLE #11.
2. CONTINUE INSTALLATION OF THE 15" SEWER MAIN WESTERLY THROUGH MANHOLES #10, #9, #8, #7, #6, #5, AND #4. TEST INTERMITTENTLY AS DETERMINED BY CONTRACTOR.
3. TEST FROM EXISTING MANHOLE AT STA. 29+86.27 THROUGH TO NEW MANHOLE #4.
4. BYPASS PUMP FLOWS FROM THE EAST AT EXISTING MANHOLE "J". BYPASS PUMP FLOWS FROM THE EXISTING MANHOLE "K" COMING TO EXISTING MANHOLE "J" AT EXISTING MANHOLE "K".
5. INSTALL MANHOLE #5A. CONNECT NEW MAIN FROM NEW MANHOLE #5A TO NEW MANHOLE #5 IN THE PROPOSED DROP CONFIGURATION. TEST FROM NEW MANHOLE #5A TO NEW MANHOLE #5.
6. CONTINUE INSTALLATION OF NEW 15" SEWER FROM NEW MANHOLE #4 TO NEW MANHOLE #3. THE INVERT OF NEW MANHOLE #2 IS APPROXIMATELY 4.5' DEEPER THAN THE EXISTING MAIN FROM EXISTING MANHOLE "H" TO EXISTING MANHOLE "L". INSTALL THE BASE OF NEW MANHOLE #2 AND BORE AND INSTALL CASING AND SEWER MAIN TOWARDS MANHOLE #2.

7. THE NEW MAIN FROM NEW MANHOLE #2 TO NEW MANHOLE #3 WILL CONFLICT WITH THE EXISTING MAIN FROM EXISTING MANHOLE "C" TO EXISTING MANHOLE "B". BYPASS PUMP FLOWS COMING INTO EXISTING MANHOLE "C" OR EXISTING MANHOLE "A".
  8. INSTALL THE REMAINDER OF THE NEW 15" MAIN TO MANHOLE #2 AND INSTALL NEW MANHOLE #2.
  9. TEST FROM NEW MANHOLE #4 TO NEW MANHOLE #2. BYPASS PUMP FLOWS COMING INTO EXISTING MANHOLE "H". CUT THE EXISTING MAIN COMING FROM THE NORTH AT NEW MANHOLE #3 AND INSTALL THE REMAINDER OF NEW MANHOLE #3. CONNECT THE EXISTING MAIN COMING FROM THE NORTH INTO NEW MANHOLE #3 IN THE PROPOSED DROP CONFIGURATION.
  10. BYPASS PUMP FLOWS COMING INTO EXISTING MANHOLE "A". INSTALL MANHOLE #1 AND INSTALL NEW 15" MAIN FROM EXISTING MANHOLE "A" TO NEW MANHOLE #2 AND TEST.
  11. BYPASS PUMP FLOWS COMING INTO EXISTING MANHOLE "C". REMOVE MANHOLE "B" AND CONNECT THE NEW 8" SEWER MAIN TO THE EXISTING SEWER MAIN NORTH OF EXISTING MANHOLE "B" AND EXTEND AND CONNECT THE NEW 8" MAIN TO NEW MANHOLE #2 IN THE PROPOSED DROP CONFIGURATION AND TEST.
  12. DECOMMISSION EXISTING LIFT STATION.
- ALL COSTS ASSOCIATED WITH BYPASS PUMPING SHALL BE INCLUDED IN THE CONTRACTOR'S LUMP SUM PRICE FOR "BYPASS PUMPING".

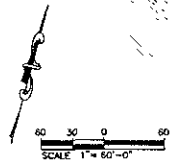
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| To Solve, To Excel, Together  |   | CATRON BOULEVARD RECONSTRUCTION<br>UTILITY RELOCATION AND MODIFICATION |                   | Sewer Sequencing Plan   |                |

LEGEND

SDDOT ROADWAY  
CONSTRUCTION PHASE 6

SDDOT ROADWAY  
CONSTRUCTION PHASE 7

JUMPER FROM NEW FIRE  
HYDRANT TO EXISTING  
FIRE HYDRANT AS PER  
STEP #9



WATER CONSTRUCTION SEQUENCING

THE CONTRACTOR SHALL INSTALL, TEST, AND CONNECT THE WATER MAIN IN THE FOLLOWING SEQUENCE. ALTERNATE SEQUENCING MAY BE PROPOSED BY THE CONTRACTOR. ALTERNATE SEQUENCING SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER. THIS SEQUENCE MAY BE SUBJECT TO CHANGE DEPENDING UPON THE ROADWAY CONSTRUCTION SEQUENCE. THIS SEQUENCE FOLLOWS THE SDDOT ROADWAY CONSTRUCTION SEQUENCE AS PLANNED.

1. INSTALL THE 12"x12" TAPPING SLEEVE, TAPPING VALVE & BOX AT STA. 0+00. COORDINATE TAP WITH CITY OF RAPID CITY WATER DIVISION.
2. CONTINUE INSTALLATION OF THE WATER MAIN SOUTH FROM STA. 0+00.00 TO JUST BEYOND THE LIMITS OF THE SDDOT PHASE 4 CONSTRUCTION.
3. INSTALL THE CASING FOR THE 8" WATER MAIN CROSSING AT STA. 13+90.04 (WATER MAIN STATIONING) UNDER THE SDDOT PHASE 4 CONSTRUCTION. THE CONTRACTOR MAY INSTALL THE CARRIER PIPE, HYDRANT, AND OTHER FITTINGS AT THAT TIME OR DURING PHASE 5 CONSTRUCTION.
4. AT THE BEGINNING OF THE SDDOT PHASE 5 CONSTRUCTION, CONNECT TO THE END OF THE NEW MAIN INSTALLED UNDER PHASE 2 CONSTRUCTION AND CONTINUE INSTALLATION OF THE 12" WATER MAIN SOUTH TO THE 90° BEND TO THE EAST AT STA. 0+97.66.
5. CONTINUE INSTALLATION OF THE NEW 12" WATER MAIN TO THE EAST ALONG WITH THE NEW MAIN STUB AND FIRE HYDRANT AT STA. 1+31.99. CONTINUE INSTALLATION OF THE NEW 12" WATER MAIN TO THE TEE, VALVE AND STA. 4+32.57. FROM THAT POINT, INSTALL THE 8" WATER MAIN TO THE SOUTH, THE 8"x8" TEE, THE 2-8"x6" REDUCERS, AND THE FIRE HYDRANT AND AUXILIARY VALVE. TEST, DISINFECT, AND FLUSH THROUGH THE NEW FIRE HYDRANTS AT STA. 4+32.57 AND 1+31.99.
6. TURN OFF THE EXISTING VALVE TO THE EXISTING SERVICE AT STA. 4+42±. INSTALL THE 6"x90° BEND, CUT THE EXISTING SERVICE AT THE CONNECTION LOCATION AND CONNECT TO THE EXISTING 6" SERVICE USING THE 6" COUPLING.

7. CONTINUE INSTALLATION OF THE NEW 12" WATER MAIN TO THE EAST, INSTALL THE TEE AT STA. 12+94.84. THE FIRE HYDRANT LEAD, THE FIRE HYDRANT AND THE 12" GATE VALVE EAST OF THE TEE. TEST, DISINFECT, AND FLUSH THE MAIN FROM STA. 4+32.57 TO STA. 12+94.84 THROUGH THE FIRE HYDRANT AT 12+94.84.
8. CONTINUE INSTALLATION OF THE NEW 12" WATER MAIN TO THE EAST, INSTALL THE COUPLING AT STA. 17+68.40, THE TEE, FIRE HYDRANT & AUXILIARY VALVE AT STA. 17+72.04 AND THE VALVE AT STA. 17+75.63. TEST, DISINFECT, AND FLUSH THE MAIN FROM STA. 12+94.84 TO 17+72.04 THROUGH THE HYDRANTS AT STA. 13+90.04 AND 17+72.04.
9. JUMPER WITH HOSE FROM THE NEW FIRE HYDRANT AT STA. 17+72.04 TO THE EXISTING FIRE HYDRANT ON THE WEST SIDE OF THE WELLINGTON DRIVE APPROACH. COORDINATE THE JUMPING WITH THE CITY OF RAPID CITY WATER DIVISION. SHUT OFF THE EXISTING VALVE ON THE EXISTING MAIN JUST EAST OF THE TIE-IN LOCATION. CONTINUE INSTALLATION OF THE NEW 12" WATER MAIN FROM THE VALVE AT STA. 17+72.04 INCLUDING THE 2-ROTATED 45° BENDS. CUT THE EXISTING MAIN AT THE TIE-IN LOCATION AND CONNECT THE NEW MAIN TO THE EXISTING MAIN WITH A 12" COUPLING. TEST, DISINFECT, AND FLUSH THE REMAINDER OF THE NEW MAIN TO THE TIE-IN LOCATION.
10. REMOVE THE EXISTING FIRE HYDRANTS, VALVE BOXES, AND ABANDON THE EXISTING MAIN AS INDICATED.
11. INSTALL THE 12" CAP ON THE EAST SIDE OF THE EXISTING VALVE EAST OF STA. 0+00.00.

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To Solve. To Excel. Together.

Prepared for

Public Works Department



Engineering Services

Drawn

AS SHOWN

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CATRON BOULEVARD RECONSTRUCTION  
UTILITY RELOCATION AND MODIFICATION

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WATER  
SEQUENCING  
PLAN

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