

NOTES:

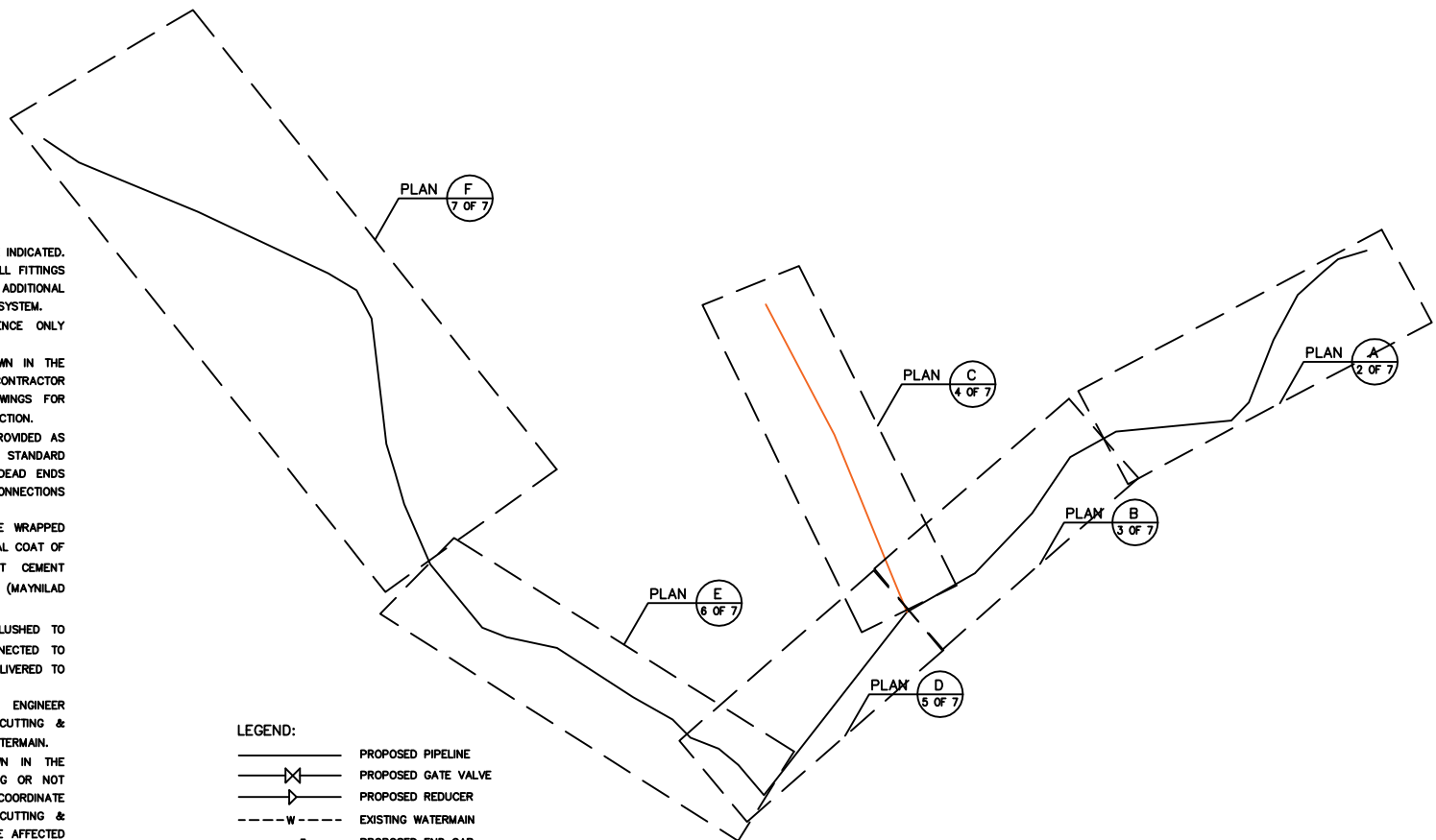
1. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE INDICATED.
2. PIPE LAYOUT DRAWINGS DO NOT NECESSARILY SHOW ALL FITTINGS AND BENDS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL FITTINGS AND BENDS AS NECESSARY TO COMPLETE THE SYSTEM.
3. ROAD NUMBERING IS FOR CONTRACT DOCUMENT'S REFERENCE ONLY AND DOES NOT REPRESENT THE ACTUAL ROAD NAMES.
4. PIPE ALIGNMENT MAY BE CHANGED FROM THAT SHOWN IN THE DRAWINGS TO SUIT ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL PREPARE THE NECESSARY MODIFICATION DRAWINGS FOR REVIEW/APPROVAL BY THE ENGINEER PRIOR TO CONSTRUCTION.
5. CONCRETE THRUST AND ANCHOR BLOCKS SHALL BE PROVIDED AS REQUIRED IN ACCORDANCE WITH THE MAYNILAD STANDARD DRAWINGS AT ALL BENDS, TEES, ELBOWS, OFFSETS, DEAD ENDS AND REDUCERS EXCEPT WHERE RESTRAINED JOINT CONNECTIONS ARE SPECIFIED.
6. ALL BURIED FLANGE & MECHANICAL JOINTS SHALL BE WRAPPED W/ PETROLATUM TAPE OR CAN BE APPLIED WITH A FINAL COAT OF COAL TAR ENAMEL (t_{min}=1000MICRONS) OR NEAT CEMENT DEPENDING ON THE COATING OF ADJACENT PIPE. (MAYNILAD TECHNICAL SPECS. VOL. 3 SECTION 31008)
7. ALL VALVE BOX/MH/DM FRAME & COVER (VISIBLE/FLUSHED TO PAVEMENT) & FIRE HYDRANT RISER ASSEMBLY CONNECTED TO DECOMMISSIONED PIPELINE SHOULD BE RETRIEVED & DELIVERED TO DESIGNATED STOCKYARD.
8. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER CONCERNED REGARDING THE ACTUAL LOCATION OF CUTTING & PLUGGING/DECOMMISSIONING POINTS OF THE EXISTING WATERMAIN.
9. IF THE EXISTING VALVE TO BE CLOSED AS SHOWN IN THE CONTRACT DRAWING IS FOUND TO BE MALFUNCTIONING OR NOT EASILY IDENTIFIED ON SITE, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER CONCERNED TO DETERMINE IF CUTTING & PLUGGING OR VALVE INSERTION IS NECESSARY FOR THE AFFECTED EXISTING WATERMAIN.
10. FOR 300# AND 250# STUB-OUT, USE GATE VALVE W/ MANHOLE.
11. PIPE LENGTHS SHOWN IN THE TABULATED DATA WERE MEASURED & VALIDATED ON SITE AND MAY BE CHANGED TO SUIT ACTUAL FIELD CONDITIONS.
12. THE CONTRACTOR SHALL COORDINATE WITH CONCERNED AGENCIES TO VERIFY ROAD CLASSIFICATIONS AND THE CORRESPONDING REQUIREMENTS ON RESTORATION. LIKEWISE, THE CONTRACTOR SHALL INVESTIGATE/EXPLORE/COORDINATE ON EXISTING UTILITIES THAT MIGHT BE AFFECTED BY THE PROPOSED WORK AND WHICH MAY NOT NECESSARILY BE SHOWN IN THE DRAWINGS.

LEGEND:

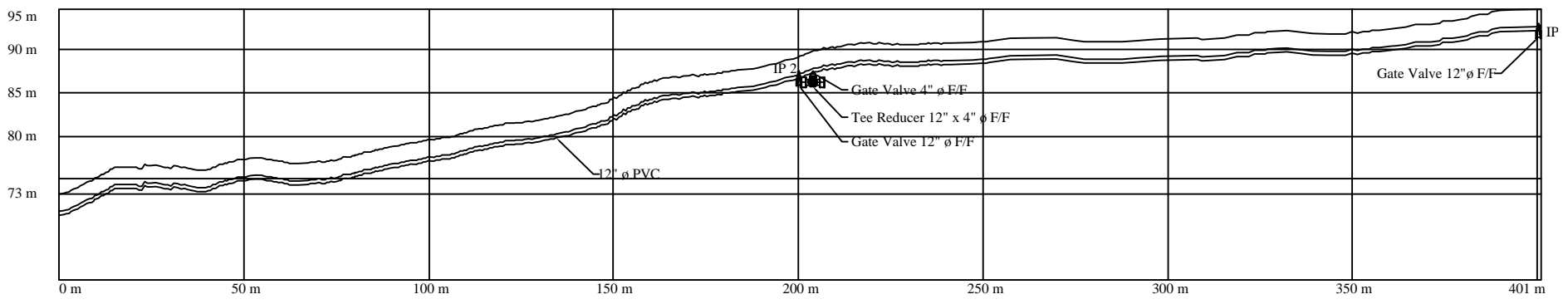
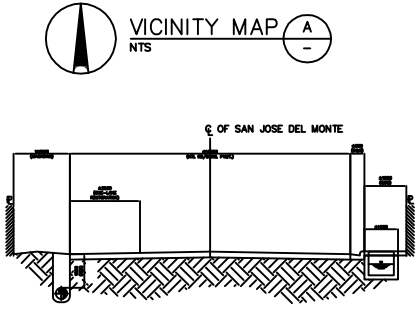
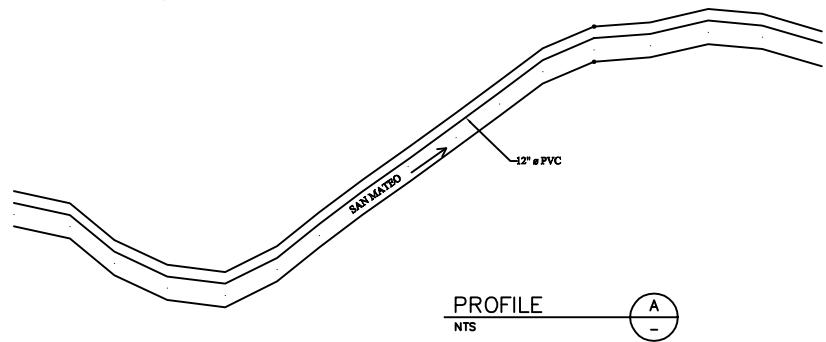
- PROPOSED PIPELINE
- |— PROPOSED GATE VALVE
- |— PROPOSED REDUCER
- - - w - - - EXISTING WATERMAIN
-] PROPOSED END CAP
- |— PROPOSED FIRE HYDRANT
- |— PROP. AIR VALVE
- |— PROP. BLOW-OFF VALVE
- PVC POLYVINYL CHLORIDE
- SP STEEL PIPE
- TB THRUST BLOCK
- CSW CONCRETE SIDEWALK
- C&G CURB & GUTTER



KEYPLAN
NTS



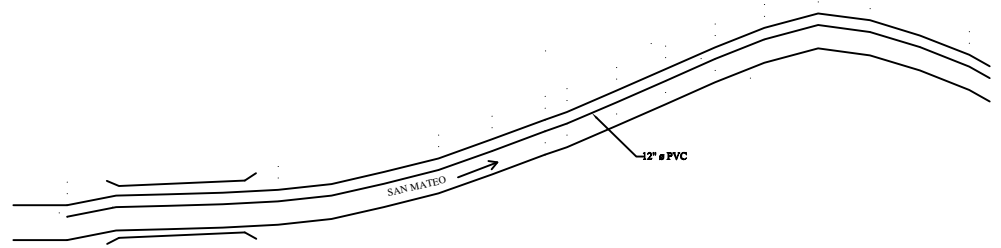
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| DRAWN | SURVEYED | DESIGNED | CHECKED | | | | | | | | | |
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| REV | DATE | BY | APPROVED BY | | | | | | | | | |
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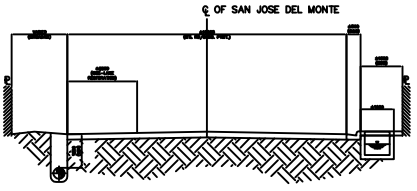
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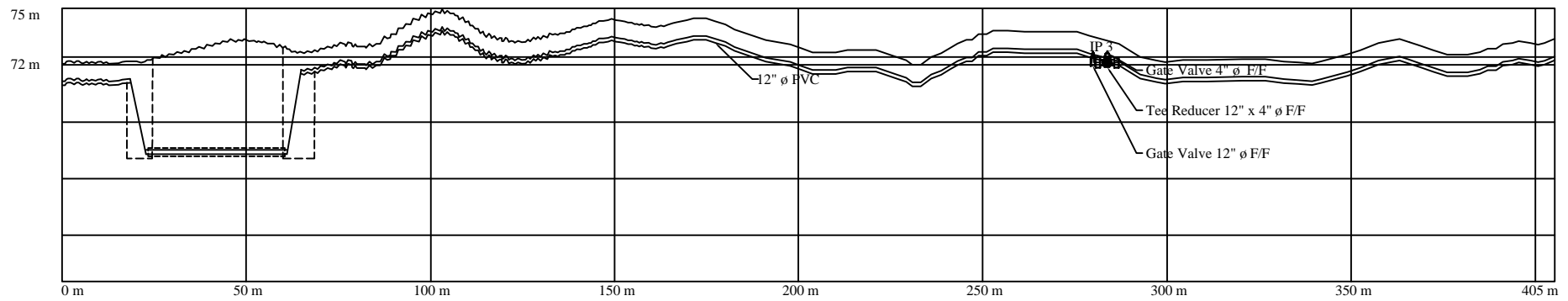
VICINITY MAP (B)
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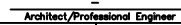
PROFILE (B)
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ROAD SECTION (B)
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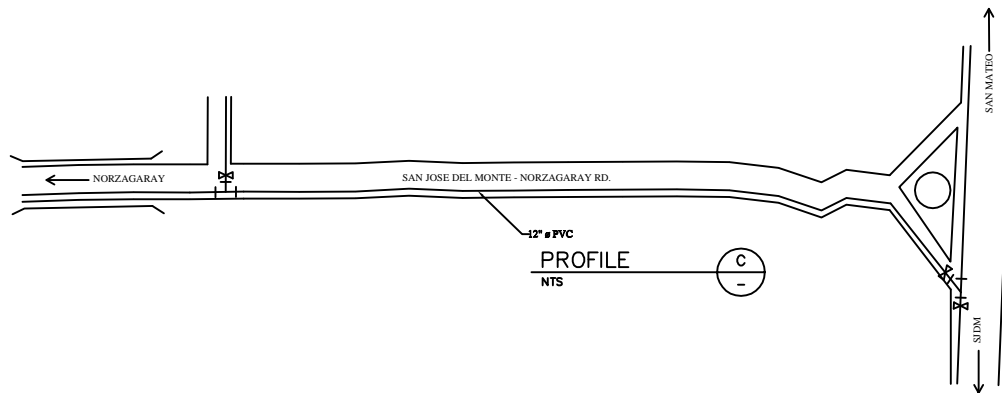
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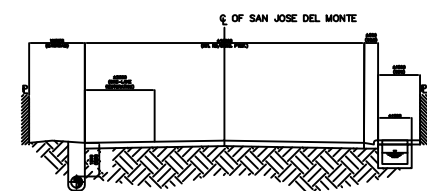

NORZAGARAY WATER DISTRICT
 1639 F. DELA MERCED ST.
 POBLACION, NORZAGARAY, BULACAN
 Prepared by:
CHRISTIAN JOYCE N. APROVECHADO
 Civil Engineer

DISCLAIMER:
Owner's issuance and conformance of this drawing shall not relieve the consultant and its designer of their design responsibilities & liabilities.
 Approved by:
AIMER B. CRUZ
 General Manager

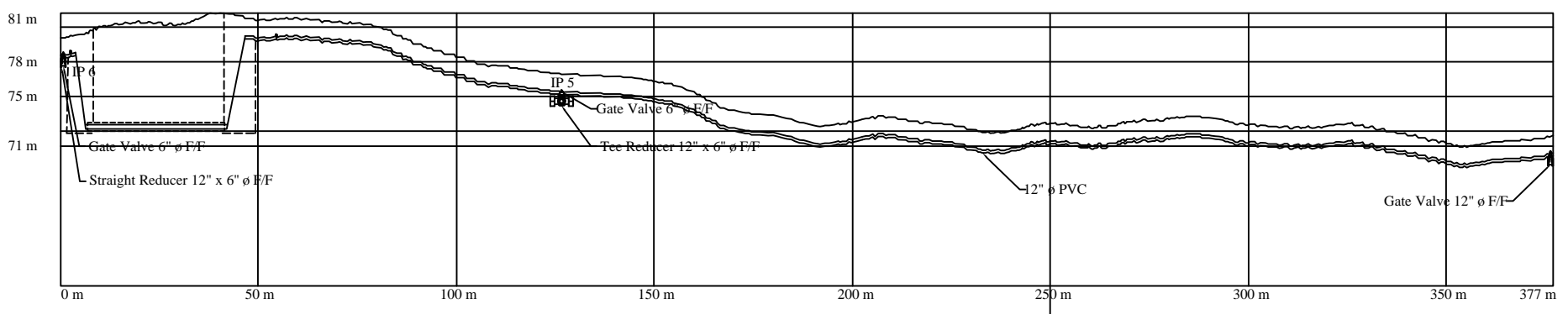
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| PROJECT TITLE: PROP. 300# & 250# SUPPLY LINE FOR NORZAGARAY WATER DISTRICT | | | |
| LOCATION: DEL MONTE-NORZAGARAY RD., NORZAGARAY, BULACAN | | | |
| SHEET CONTENT: PLAN B, PROFILE B, VICINITY MAP B & ROAD SECTION B | | | |
| SCALE: AS SHOWN | CONTRACT NO. - | SHEET NO. 3 OF 18 | REV. - |



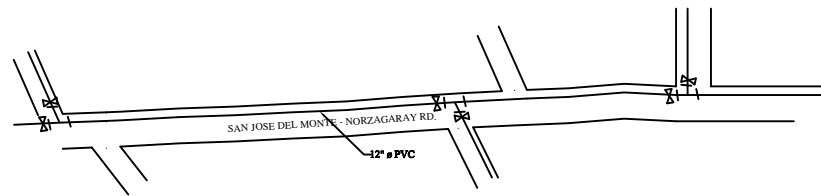
VICINITY MAP
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ROAD SECTION
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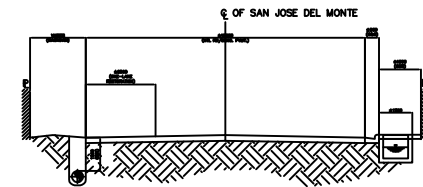
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| REVISION APPROVED BY: _____ DATE: _____ | PROFESSION : REGISTRATION NO. : TIN : | PTR : DATE ISSUED : PLACE ISSUED : | | | | | | | | | | | |



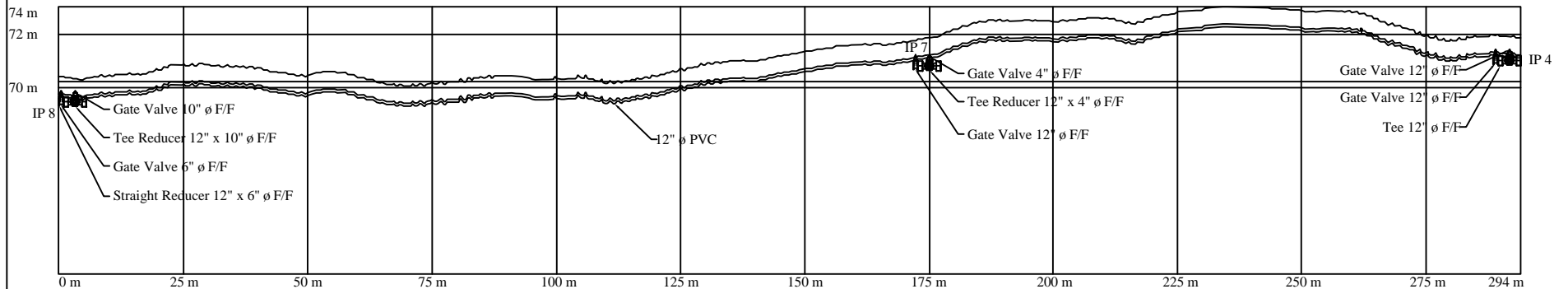
PROFILE
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VICINITY MAP
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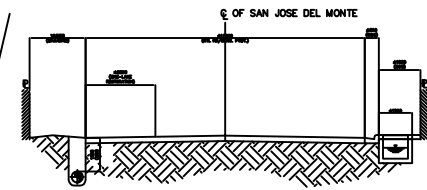
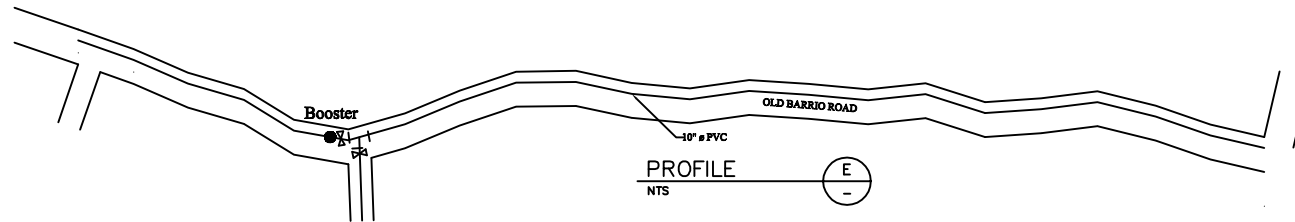
ROAD SECTION
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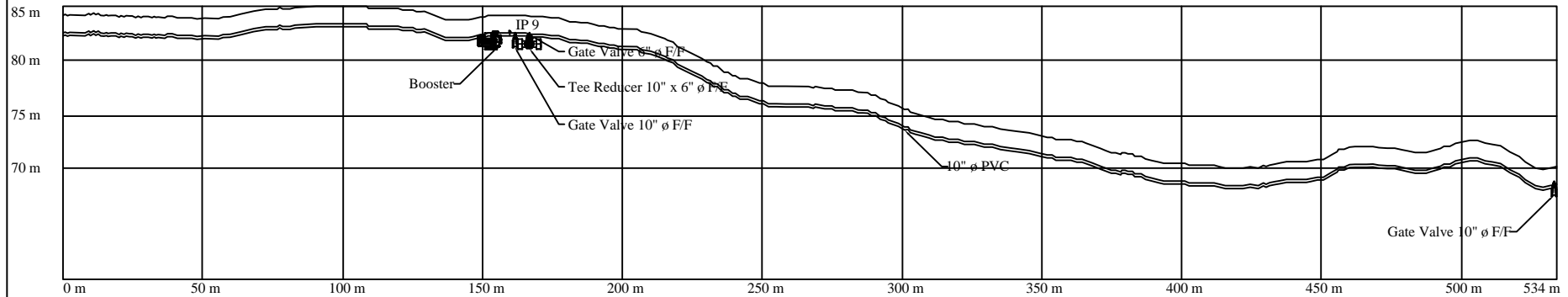
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| | | | | | | | | | | | |
| SHEET CONTENT: PLAN D, PROFILE D, VICINITY MAP D & ROAD SECTION D | | SCALE: AS SHOWN | CONTRACT NO. : - SHEET NO. : 5 OF 18 REV. : - | | | | | | | | |



VICINITY MAP E
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ROAD SECTION E
NTS



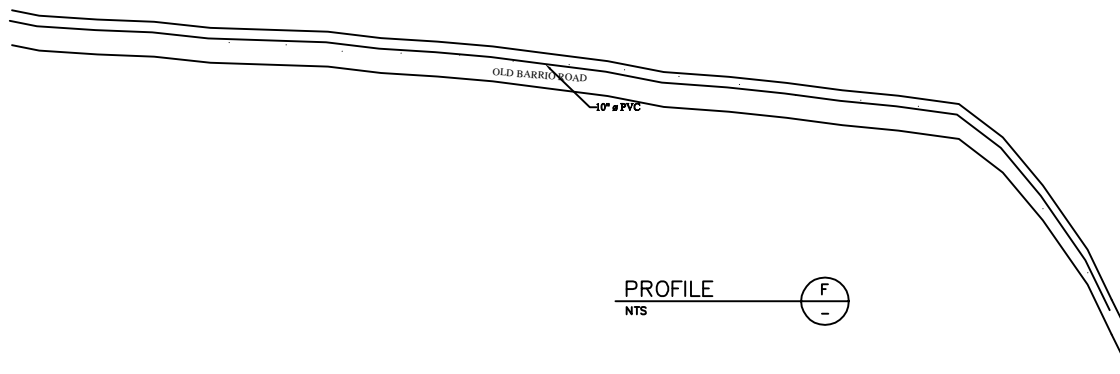
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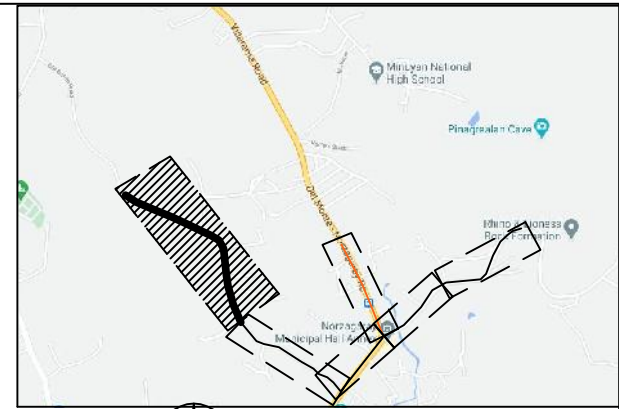
NORZAGARAY WATER DISTRICT
 Prepared by:
CHRISTIAN JOYCE N. APROVECHADO
 Civil Engineer

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 POBLACION, NORZAGARAY, BULACAN
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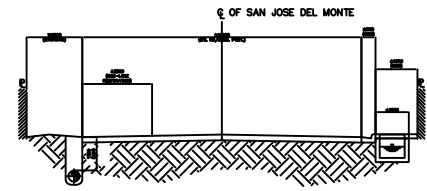
| CONTRACT DRAWING | | | |
|---|-------------------|----------------------|-----------|
| PROJECT TITLE: PROP. 300# & 250# SUPPLY LINE FOR NORZAGARAY WATER DISTRICT | | | |
| LOCATION: DEL MONTE-NORZAGARAY RD., NORZAGARAY, BULACAN | | | |
| SHEET CONTENT: PLAN E, PROFILE E, VICINITY MAP E & ROAD SECTION E | | | |
| SCALE: AS SHOWN | CONTRACT NO. - | SHEET NO. 6 OF 18 | REV. - |



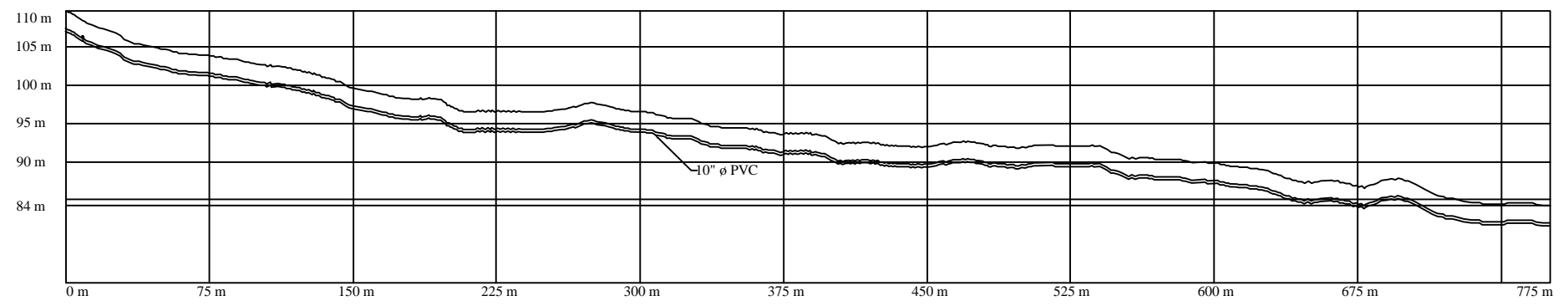
PROFILE
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VICINITY MAP
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ROAD SECTION
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| Checked & Certified : | | - | |
| | | Architect/Professional Engineer | |
| PROFESSION : | PTR : | Prepared by: | |
| REGISTRATION NO. : | DATE ISSUED : | CHRISTIAN JOYCE N. APROVECHADO Civil Engineer | |
| TIN : | PLACE ISSUED : | Approved by: | |
| | | AIMER B. CRUZ General Manager | |

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| NORZAGARAY WATER DISTRICT | 1639 F. DELA MERCED ST. POBLACION, NORZAGARAY, BULACAN |
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| LOCATION: DEL MONTE-NORZAGARAY RD., NORZAGARAY, BULACAN | |
| SHEET CONTENT: PLAN F, PROFILE F, VICINITY MAP F & ROAD SECTION F | |
| SCALE: AS SHOWN | CONTRACT NO.: - SHEET NO.: 7 OF 18 REV.: - |

PIPELAYING DATA PER STREET (VIA STANDARD PIPELAYING)

| ITEM NO. | STREET NAME | | | PROPOSED PIPE | | |
|----------|-----------------------------------|-----------------------|-------------------|---------------|------------|------------|
| | ALONG | FROM | TO | MATERIAL | SIZE (mmø) | LENGTH (m) |
| 1 | SAN JOSE DELMONTE-NORZAGARAY ROAD | SETTLING POND OF MWSS | MBS | PVC | 300 | ±794 |
| 2 | SAN JOSE DELMONTE-NORZAGARAY ROAD | MBS | UWAK BRIDGE | PVC | 300 | ±370 |
| | SUB-TOTAL (300mmø) | | | | | ±1164 |
| 3 | SAN JOSE DELMONTE-NORZAGARAY ROAD | MBS | CORNER OLD BARRIO | PVC | 250 | ±289 |
| 4 | SAN JOSE DELMONTE-NORZAGARAY ROAD | CORNER OLD BARRIO | ENTRANCE OF BRIA | PVC | 250 | ±530 |
| 5 | SAN JOSE DELMONTE-NORZAGARAY ROAD | ENTRANCE OF BRIA | BRIA TANK | PVC | 250 | ±770 |
| | SUB-TOTAL (250mmø) | | | | | ±1589 |
| | GRAND TOTAL | | | | | ±2753 |

| TRENCH WIDTH PER PIPE SIZE | | | |
|----------------------------|-----------------------|------------------|-------------------------|
| PIPE SIZE (mmø) | TRENCH WIDTH, (W) (m) | BEDDING, (B) (m) | DEPTH OF COVER, (D) (m) |
| 400 | 0.7 | 0.15 | 1.20 |
| 300 | 0.6 | 0.15 | 1.20 |
| 250 | 0.55 | 0.15 | 0.90 |
| 200 | 0.5 | 0.15 | 0.90 |
| 150 | 0.45 | 0.10 | 0.90 |
| 100 | 0.4 | 0.10 | 0.75 |
| 75 | 0.38 | 0.06 | 0.75 |
| 50 | 0.35 | 0.05 | 0.75 |

PIPELAYING DATA PER STREET (VIA PIPE JACKING METHOD)

| ITEM NO. | STREET NAME | | | PROPOSED PIPE | | |
|----------|---|------|----|---------------|------------|------------|
| | ALONG | FROM | TO | MATERIAL | SIZE (mmø) | LENGTH (m) |
| 1 | TRENCHLESS PIPELAYING VIA PIPE JACKING ALONG SAN JOSE DEL MONTE-NORZAGARAY ROAD CROSSING UP-DOWN BRIDGE | | | SP | 300 | ±85 |
| 2 | JACKING CONNECTOR PIPE ALONG SAN JOSE DEL MONTE-NORZAGARAY ROAD CROSSING UP-DOWN BRIDGE | | | SP | 300 | ±27 |
| | SUB-TOTAL (300mmø) | | | | | ±92 |
| | GRAND TOTAL | | | | | ±92 |

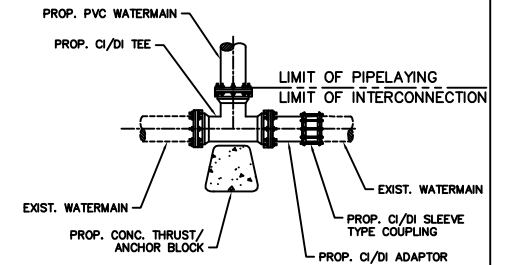
PIPELAYING DATA PER STREET (VIA HDD)

| ITEM NO. | STREET NAME | | | PROPOSED PIPE | | |
|----------|--|------|----|---------------|------------|------------|
| | ALONG | FROM | TO | MATERIAL | SIZE (mmø) | LENGTH (m) |
| 1 | TRENCHLESS PIPELAYING VIA HDD ALONG SAN JOSE DEL MONTE-NORZAGARAY ROAD CROSSING UP-DOWN BRIDGE | | | HDPE | 300 | ±125 |
| | SUB-TOTAL (300mmø) | | | | | ±125 |
| | GRAND TOTAL | | | | | ±125 |

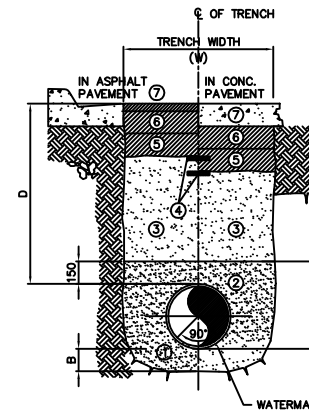
LEGEND

| | |
|---|-------------------------------|
| ① | BEDDING - SAND |
| ② | PIPE ZONE - SAND |
| ③ | SANDFILL |
| ④ | MARKER TAPE |
| ⑤ | SUB BASE COURSE (MIN t = 150) |
| ⑥ | BASE COURSE (MIN t = 150) |
| ⑦ | EXIST ROAD PAVEMENT |

NOTES:
 1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
 2. MARKER TAPE SHOULD BE DETECTABLE UP TO DEPTH OF 600mm, WITH MARKING "CAUTION WATER LINE BURIED BELOW" & TENSILE STRENGTH OF 6 kg/cm MIN.

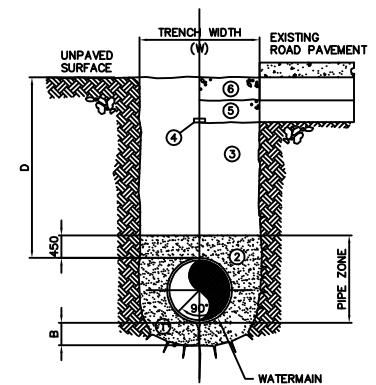


INTERCONNECTION DETAIL 3
 NTS



IN EARTH/SANDY SOIL, ADOBE, HARD PAN OR SHALE / HARD CLAY

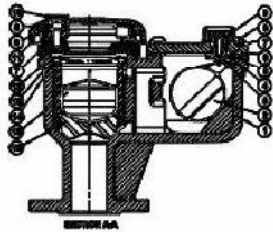
TRENCH DETAIL 1
 (PIPELAYING ON ROADWAY)



IN EARTH/SANDY SOIL, ADOBE, HARD PAN OR SHALE / HARD CLAY

TRENCH DETAIL 2
 (PIPELAYING ON MACADAM SHOULDER OR UNPAVED ROAD)

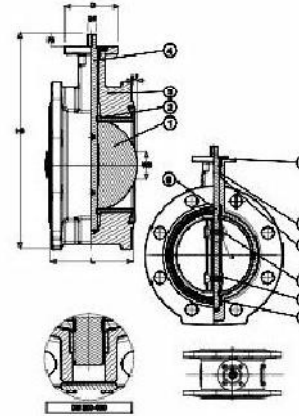
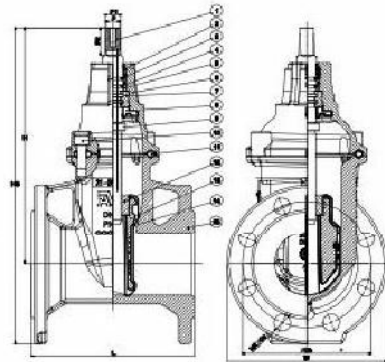
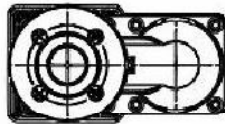
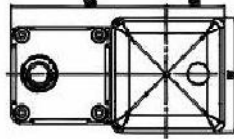
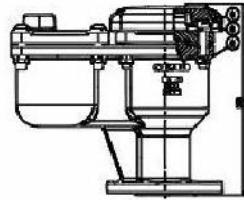
| DRAWN | SURVEYED | DESIGNED | CHECKED | Checked & Certified : | NORZAGARAY WATER DISTRICT | | 1639 P. DELA MERCED ST. POBLACION, NORZAGARAY, BULACAN | | CONTRACT DRAWING | | | |
|----------|----------|----------|-------------|-----------------------|---------------------------------|--|--|--|--|-------------------|--------|--|
| - | - | - | - | - | Architect/Professional Engineer | | DISCLAIMER: Owner's issuance and conformance of this drawing shall not relieve the consultant and its designer of their design responsibilities & liabilities. | | PROJECT TITLE: PROP. 300ø & 250ø SUPPLY LINE FOR NORZAGARAY WATER DISTRICT | | | |
| REVISION | | | | PROFESSION : | PTR : | Prepared by: | Approved by: | LOCATION: DEL MONTE-NORZAGARAY RD., NORZAGARAY, BULACAN | | | | |
| REV | DATE | BY | APPROVED BY | REGISTRATION NO. : | DATE ISSUED : | CHRISTIAN JOYCE N. APROVECHADO Civil Engineer | AIMER B. CRUZ General Manager | SHEET CONTENT: PIPELAYING DATA PER SHEET AND TRENCH DETAIL | | | | |
| | | | | TIN : | PLACE ISSUED : | | | SCALE: AS SHOWN | CONTRACT NO. - | SHEET NO. 8 OF 18 | REV. - | |



Component list:

- | | |
|-------------------------|---------------------------------|
| 1. Body | Ductile iron GJS-500-7 (GGG-50) |
| 2. Small orifice float | ABS |
| 3. Split pin | Stainless steel 1.4307 |
| 4. Orifice bracket | Polyamide |
| 5. Gasket | EPDM rubber |
| 6. O-ring | EPDM rubber |
| 7. Bonnet | Ductile iron GJS-500-7 (GGG-50) |
| 8. Bolt/nut/washer | Stainless steel |
| 9. Orifice cover | Polyamide |
| 10. Plug | Plastic |
| 11. Cowl | Ductile iron GJS-500-7 (GGG-50) |
| 12. Seal ring | ABS |
| 13. Seal ring | EPDM rubber |
| 14. Guide ring | ABS |
| 15. Large orifice float | ABS |
| 16. Float guide | ABS |

Components may be substituted with equivalent or higher class materials without prior notification.



Component list:

1. Disc
2. Liner
3. Body
4. Stem
5. Pin
6. Bushing
7. O-ring
8. Wiper ring
9. O-ring

Component list:

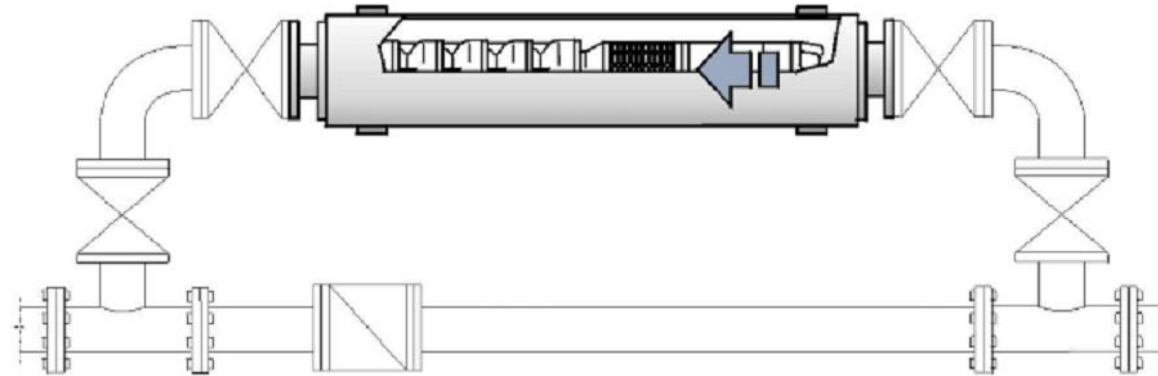
- | | |
|-----------------------------|--|
| 1. Stem | Stainless steel 1.4104 |
| 2. Wiper ring | NBR rubber |
| 3. O-ring | NBR rubber |
| 4. O-ring | NBR rubber |
| 5. Bearing | Polyamide |
| 6. Bonnet | Ductile iron, EN-GJS-500-7(GGG-50) |
| 7. Thrust collar | Dezincification resistant brass |
| 8. Manchette | EPDM rubber |
| 9. Stop ring | Stainless steel |
| 10. Bonnet bolt | Stainless steel A2, sealed with hot melt |
| 11. Bonnet gasket | EPDM rubber |
| 12. Wedge nut | Dezincification resistant brass |
| 13. Wedge core | Ductile iron |
| 14. Wedge rubber | EPDM rubber |
| 15. Body | Ductile iron, EN-GJS-500-7(GGG-50) |
| 16. Circlip ring(DN350-400) | Stainless steel |

Components may be substituted with equivalent or higher class materials without prior notification.

| | | | | | | |
|-----------------|----------|----------|-------------|---|---|--|
| DRAWN | SURVEYED | DESIGNED | CHECKED | Checked & Certified : _____ Architect/Professional Engineer | 1639 P. DELA MERCED ST. POBLACION, NORZAGARAY, BULACAN NORZAGARAY WATER DISTRICT | CONTRACT DRAWING PROJECT TITLE: PROP. 200# & 250# SUPPLY LINE FOR NORZAGARAY WATER DISTRICT LOCATION: DEL MONTE-NORZAGARAY RD., NORZAGARAY, BULACAN |
| REVISION | | | | PROFESSION : | Prepared by: | Approved by: |
| REV | DATE | BY | APPROVED BY | REGISTRATION NO. : | DATE ISSUED : | CHRISTIAN JOYCE N. APROVECHADO Civil Engineer |
| | | | | TIN : | PLACE ISSUED : | AIMER B. CRUZ General Manager |
| | | | | SHEET CONTENT: VALVES | | SCALE: AS SHOWN |
| | | | | CONTRACT NO. : - | | SHEET NO. 9 OF 18 |
| | | | | REV. : - | | |

Booster Sets

Example of installations



**Horizontal
with by-pass**



NORZAGARAY WATER DISTRICT

1639 P. DELA MERCED ST., POBLACION, NORZAGARAY, BULACAN
TEL/FAX: (044) 815-3964, E-MAIL: norzagaray_wd@yahoo.com

| | |
|--------------------|--|
| PROJECT | CONSTRUCTION OF NORZAGARAY WATER SUPPLY SYSTEM IMPROVEMENT PROJECT |
| LOCATION | MWSS SETTLING BASIN TO MBS MULTI PURPOSE HALL TO NORZAGARAY SAN JOSE ROAD & MATANDANG BARRIO ROAD BARANGAY BIGTE |
| DESCRIPTION | PIPELAYING OF 2.58 KM ØPVC PIPES |
| SHT CONTENT | BOOSTER PUMP VAULT (STRUCTURAL DETAIL) INTERCONNECTION |

PREPARED BY
ENGR. JOHN BILLY A. SANTIAGO

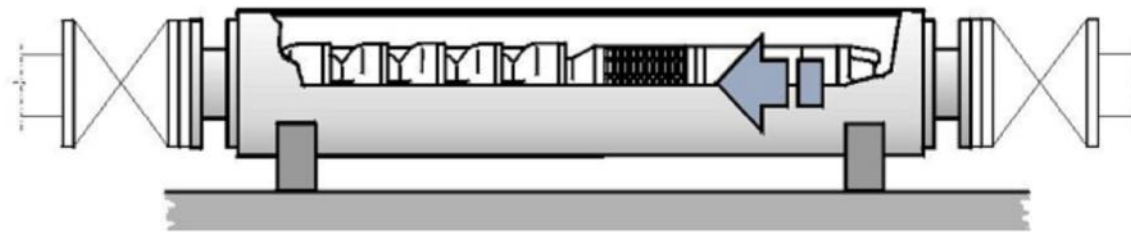
APPROVED BY
ENGR. AIMER B. CRUZ

SCALE AS SHOWN (ACTUAL SIZE)

SHEET NO. 11 OF 18

Booster Sets

Example of installations



**Horizontal
direct
mounting**



NORZAGARAY WATER DISTRICT
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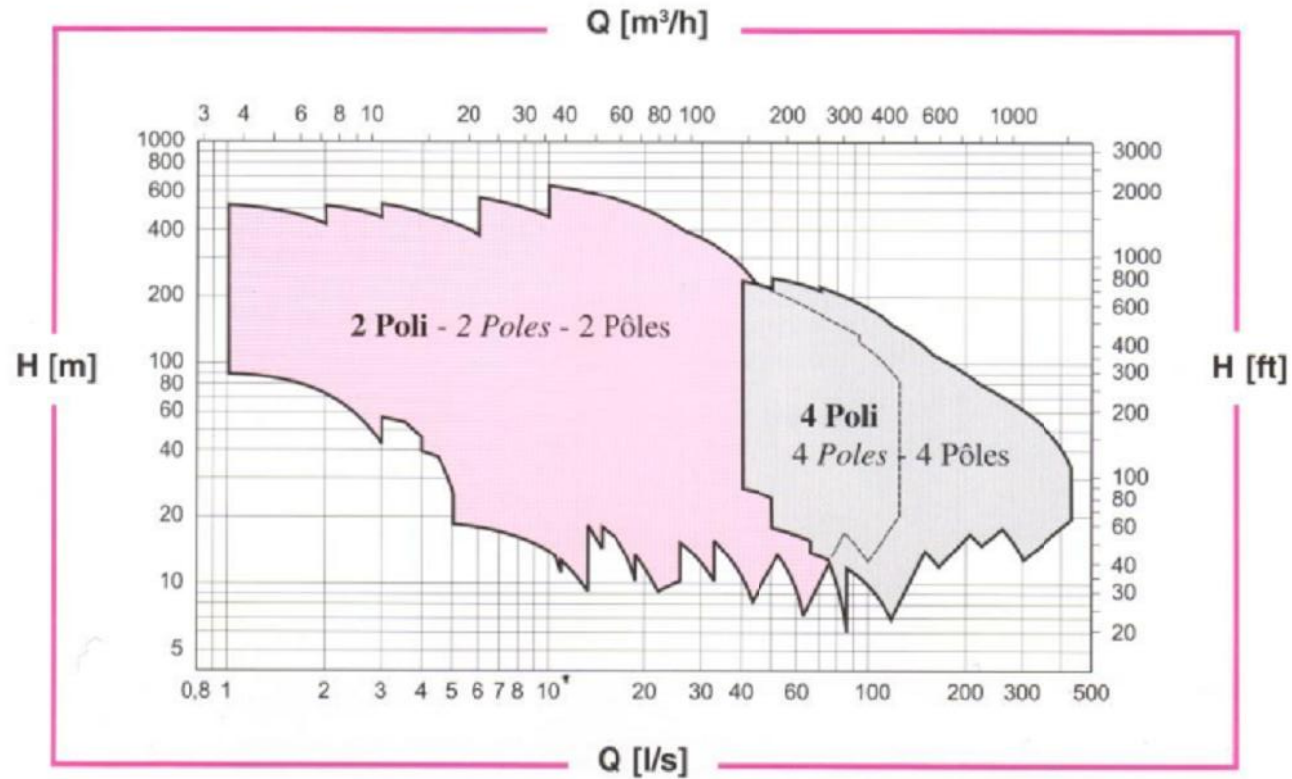
APPROVED BY
ENGR. AIMER B. CRUZ

| | | | |
|------------------|------------------------|----|----|
| SCALE | AS SHOWN (ACTUAL SIZE) | | |
| SHEET NO. | 12 | OF | 18 |

Booster Sets

60 Hz

Performance ranges



NORZAGARAY WATER DISTRICT

1639 P. DELA MERCED ST., POBLACION, NORZAGARAY, BULACAN
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| DESCRIPTION | PIPELAYING OF 2.58 KM øPVC PIPES |
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ENGR. JOHN BILLY A. SANTIAGO

APPROVED BY
ENGR. AIMER B. CRUZ

SCALE AS SHOWN (ACTUAL SIZE)

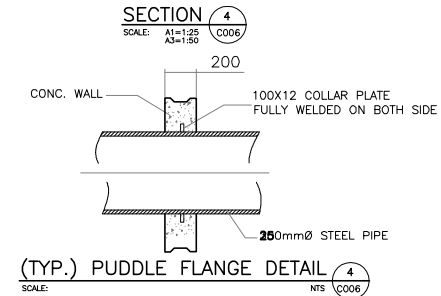
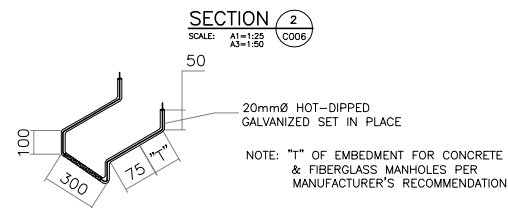
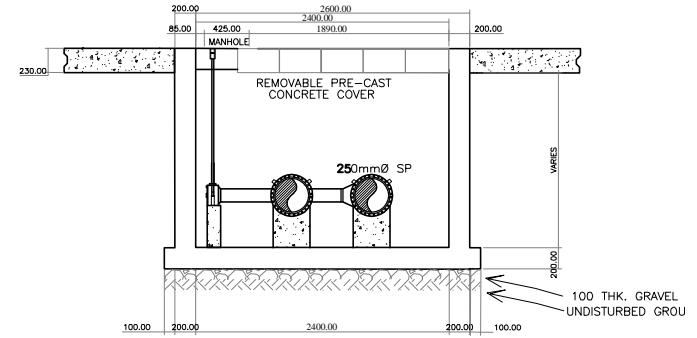
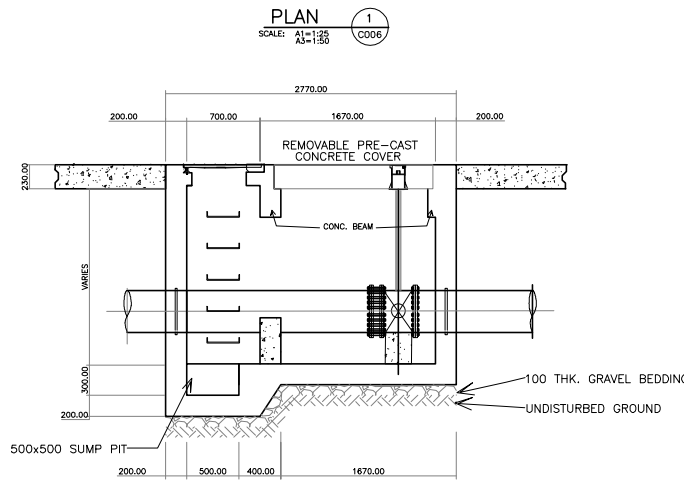
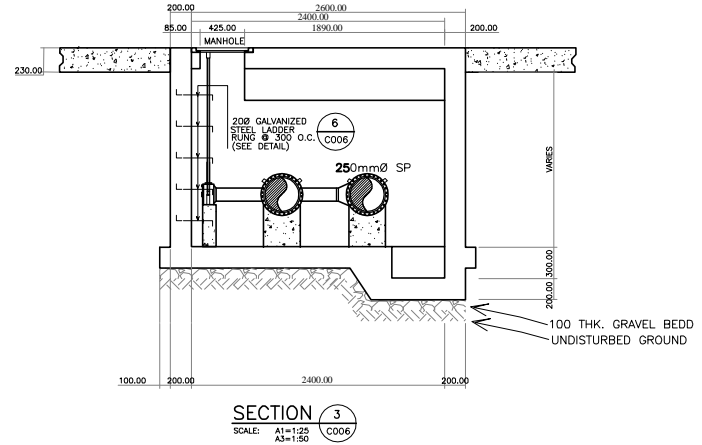
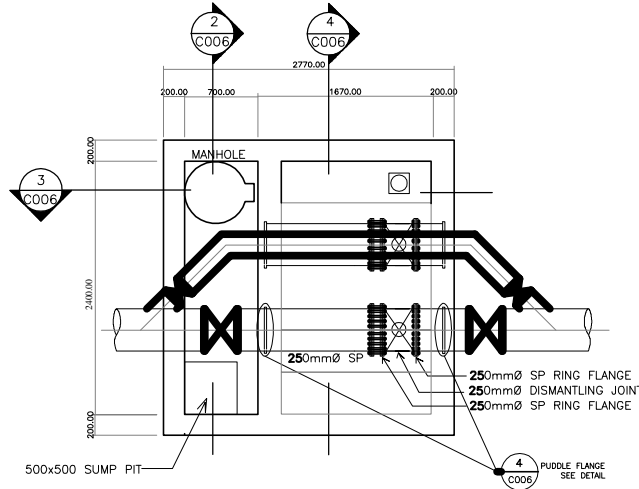
SHEET NO. 13 OF 18

NOTES:

1. ALL WORK SHALL CONFORMED TO MWC TEC SPECIFICATION VERSION 4.
2. PROVIDE THRUST BLOCK ON TEES, BENDS AND END CAPS.
3. SPLIT TEE SHALL BE SUBJECTED TO AIR LE TEST BEFORE TAPPING IS MADE.
4. THE MAXIMUM ALLOWABLE DEFLECTION FOR FLEXIBLE JOINTS IS 2'.

LEGEND:

- EP ELECTRIC POST
- LP/SL LIGHT POST/STREET LIGHT
- EPW ELECTRIC POST WOOD
- SP SIGN POST
- ⬆ FIRE HYDRANT
- WM WATER METER
- EXISTING WATERMAIN
- NEW WATERMAIN
- BLOW-OFF
- NEWLY INSTALLED MSA



NORZAGARAY WATER DISTRICT
 1639 P. DELA MERCED ST., POBLACION, NORZAGARAY, BULACAN
 TEL/FAX: (044) 815-3964, E-MAIL: norzagaray_wd@yahoo.com

PROJECT CONSTRUCTION OF NORZAGARAY WATER SUPPLY SYSTEM IMPROVEMENT PROJECT
LOCATION MWSS SETTling BASIN TO MBS MULTI PURPOSE HALL TO NORZAGARAY SAN JOSE ROAD & MATANGDANG BARRIO ROAD BARANGAY BRETE
DESCRIPTION PIPELAYING OF 2.58 KM ØPVC PIPES VALVE VAULT (STRUCTURAL DETAIL)
SHT CONTENT INTERCONNECTION

PREPARED BY
 ENGR. JOHN BILLY A. SANTIAGO

APPROVED BY
 ENGR. AIMER B. CRUZ

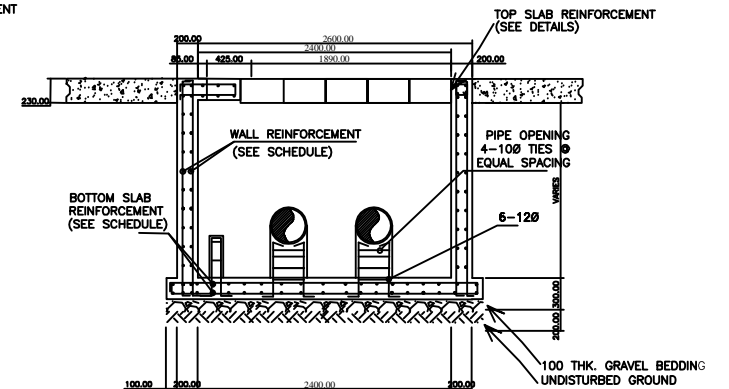
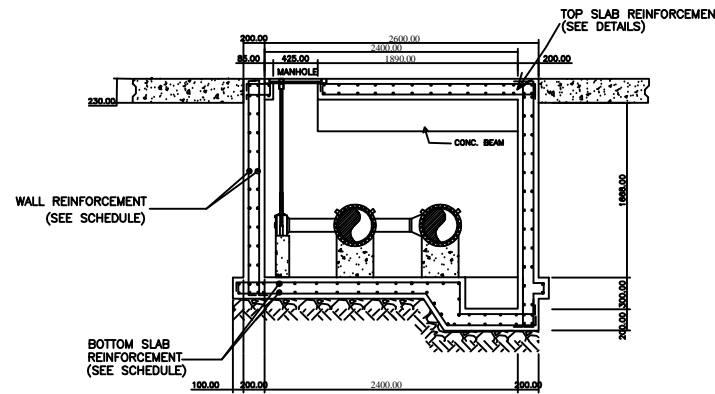
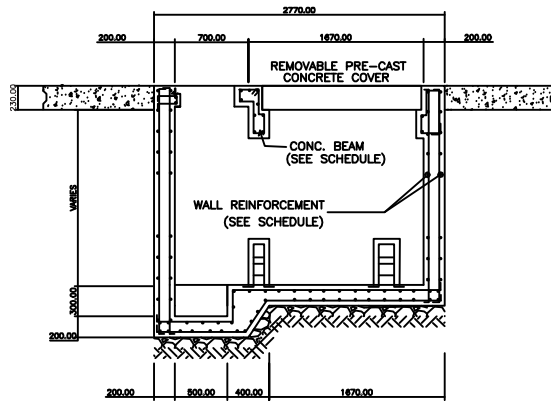
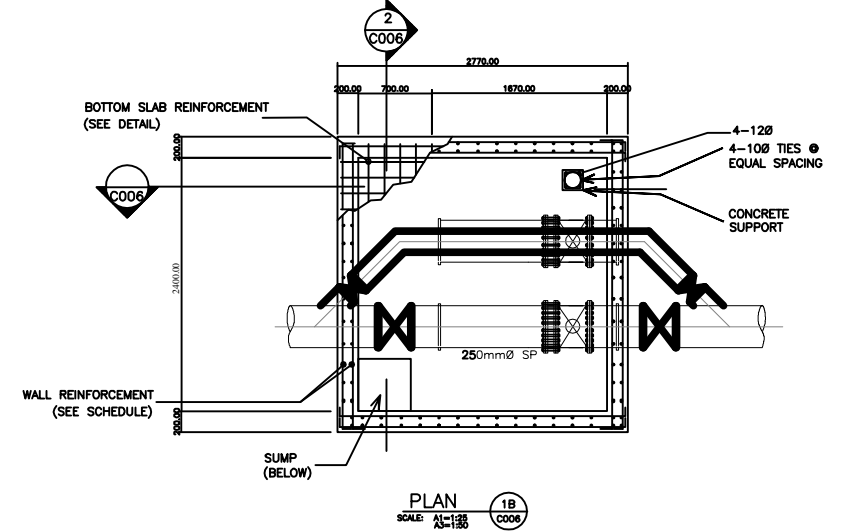
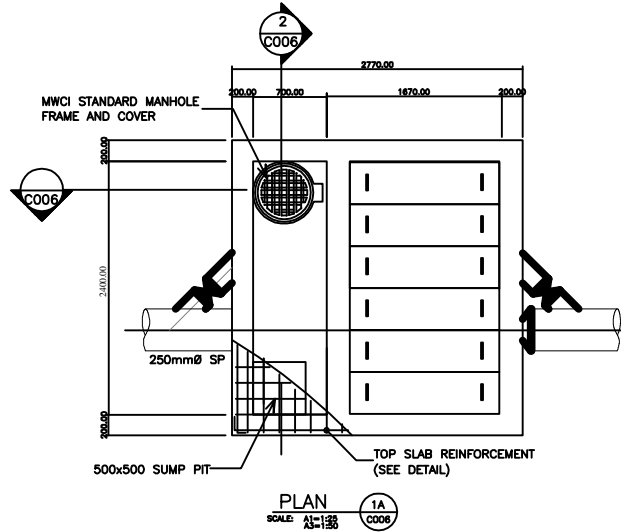
SCALE AS SHOWN (ACTUAL SIZE)
SHEET NO. 14 OF 18

NOTES:

1. ALL WORK SHALL CONFORMED TO MWC TEC SPECIFICATION VERSION 4.
2. PROVIDE THRUST BLOCK ON TEES, BENDS AND END CAPS.
3. SPLIT TEE SHALL BE SUBJECTED TO AIR LEAK TEST BEFORE TAPPING IS MADE.
4. THE MAXIMUM ALLOWABLE DEFLECTION FOR FLEXIBLE JOINTS IS 2'.

LEGEND:

- EP ELECTRIC POST
- LP/SL LIGHT POST/STREET LIGHT
- EPW ELECTRIC POST WOOD
- SP SIGN POST
- ⬆ FIRE HYDRANT
- WM WATER METER
- EXISTING WATERMAIN
- NEW WATERMAIN
- BLOW-OFF
- NEWLY INSTALLED MSA



| STEEL REINFORCEMENT SCHEDULE | | | | | | |
|------------------------------|--------------------------------------|--------------------------------------|----------|----------|-------------|---|
| PIPE SIZE NORMAL | TOP SLAB | BOTTOM SLAB | BEAM | | | |
| | | | TOP BARS | WEB BARS | BOTTOM BARS | REINFORCING BARS |
| 250 | 16mmØ @ 150 O. C. EACHWAY; EACH FACE | 16mmØ @ 150 O. C. EACHWAY; EACH FACE | 3-25mmØ | 2-20mmØ | 2-25mmØ | 2 @ 50; 2 @ 75; 3 @ 100; REST @ 250 O.C. FROM FACE OF THE SUPPORT TO MID SPAN |

| STEEL REINF. SCHEDULE | | |
|-----------------------|---------------------|-----------|
| PIPE SIZE NORMAL | PRECAST CONC. COVER | |
| | TOP BARS | BOT. BARS |
| 250 | 4-25mmØ | 7-25mmØ |

| WALL REINFORCEMENT SCHEDULE | | |
|-----------------------------|----------------|------------------|
| DEPTH (H) | THICKNESS (TW) | REINFORCING BARS |
| | | 1500 to 2500 |



NORZAGARAY WATER DISTRICT

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PROJECT
LOCATION
DESCRIPTION
SHT CONTENT

CONSTRUCTION OF NORZAGARAY WATER SUPPLY SYSTEM IMPROVEMENT PROJECT
MWS SETTling BASIN TO MBS MULTI PURPOSE HALL TO NORZAGARAY SAN JOSE ROAD & MATandang BARRIO ROAD BARANGAY BRETE
PIPELAYING OF 2.58 KM Ø PVC PIPES
VALVE VAULT (STRUCTURAL DETAIL)
INTERCONNECTION

PREPARED BY

ENGR. JOHN BILLY A. SANTIAGO

APPROVED BY

ENGR. AIMER B. CRUZ

SCALE

AS SHOWN (ACTUAL SIZE)

SHEET NO.

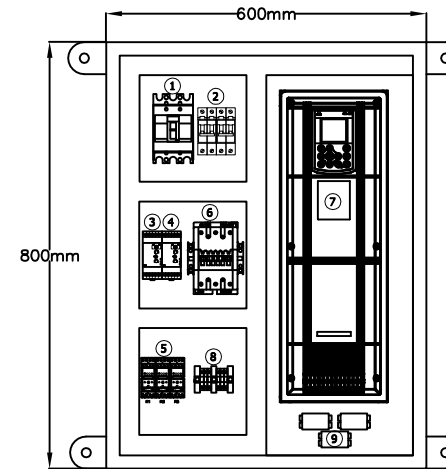
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OF

18

SHOP DRAWING FOR MCC PANEL

| ITEM | DESCRIPTION | MFG |
|------|----------------------------------|---------------|
| 1 | MOLDED CASE CIRCUIT BREAKER | ABB |
| 2 | MINIATURE CIRCUIT BREAKER | ABB |
| 3 | UNDER/OVER VOLTAGE RELAY | ANLY |
| 4 | LIQUID LEVEL RELAY | CARLO GAVAZZI |
| 5 | MINIATURE CONTROL RELAY COIL 220 | OMRON |
| 6 | CONTACTOR 3P, 50A, 220V COIL | ABB |
| 7 | VARIABLE FREQUENCY DRIVE | DANFOSS |
| 8 | TERMINAL BLOCK | - |
| 9 | CURRENT TRANSFORMER | SFIM |
| 10 | DIGITAL MULTIMETER | CAMSCO |
| 11 | PILOT LIGHT AMBER 220V | C&S ELECTRIC |
| 12 | PILOT LIGHT GREEN 220V | C&S ELECTRIC |
| 13 | PILOT LIGHT RED 220V | C&S ELECTRIC |
| 14 | PUSH BUTTON GREEN | C&S ELECTRIC |
| 15 | PUSH BUTTON RED | C&S ELECTRIC |
| 16 | SELECTOR SWITCH 3-POSITION | C&S ELECTRIC |
| 17 | EXHAUST FAN WITH FILTER | - |



COMPONENTS LAYOUT



NORZAGARAY WATER DISTRICT

1639 P. DELA MERCED ST., POBLACION, NORZAGARAY, BULACAN
TEL/FAX: (044) 815-3964, E-MAIL: norzagaray_wd@yahoo.com

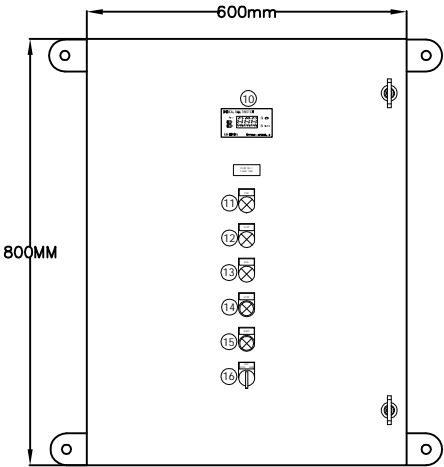
| | |
|-------------|--|
| PROJECT | CONSTRUCTION OF NORZAGARAY WATER SUPPLY SYSTEM IMPROVEMENT PROJECT |
| LOCATION | MWSS SETTLING BASIN TO MBS MULTI PURPOSE HALL TO NORZAGARAY SAN JOSE ROAD & MATANDANG BARRIO |
| DESCRIPTION | ROAD BARANGAY BIETE PIPELAYING OF 2.58 KM uPVC PIPES |
| SHT CONTENT | MOTOR CONTROL CENTER |

PREPARED BY
ENGR. JOHN BILLY A. SANTIAGO

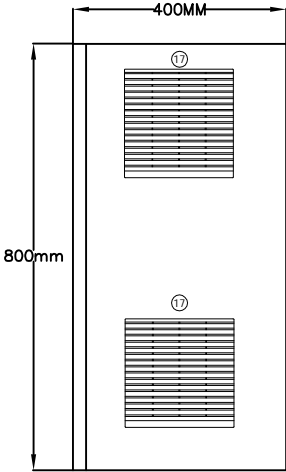
APPROVED BY
ENGR. AIMER B. CRUZ

| | |
|----------------------|------------------------|
| SCALE | AS SHOWN (ACTUAL SIZE) |
| MOTOR CONTROL CENTER | |
| SHEET NO. | 16 OF 18 |

SHOP DRAWING FOR MCC PANEL



DOOR PANEL LAYOUT



SIDE VIEW



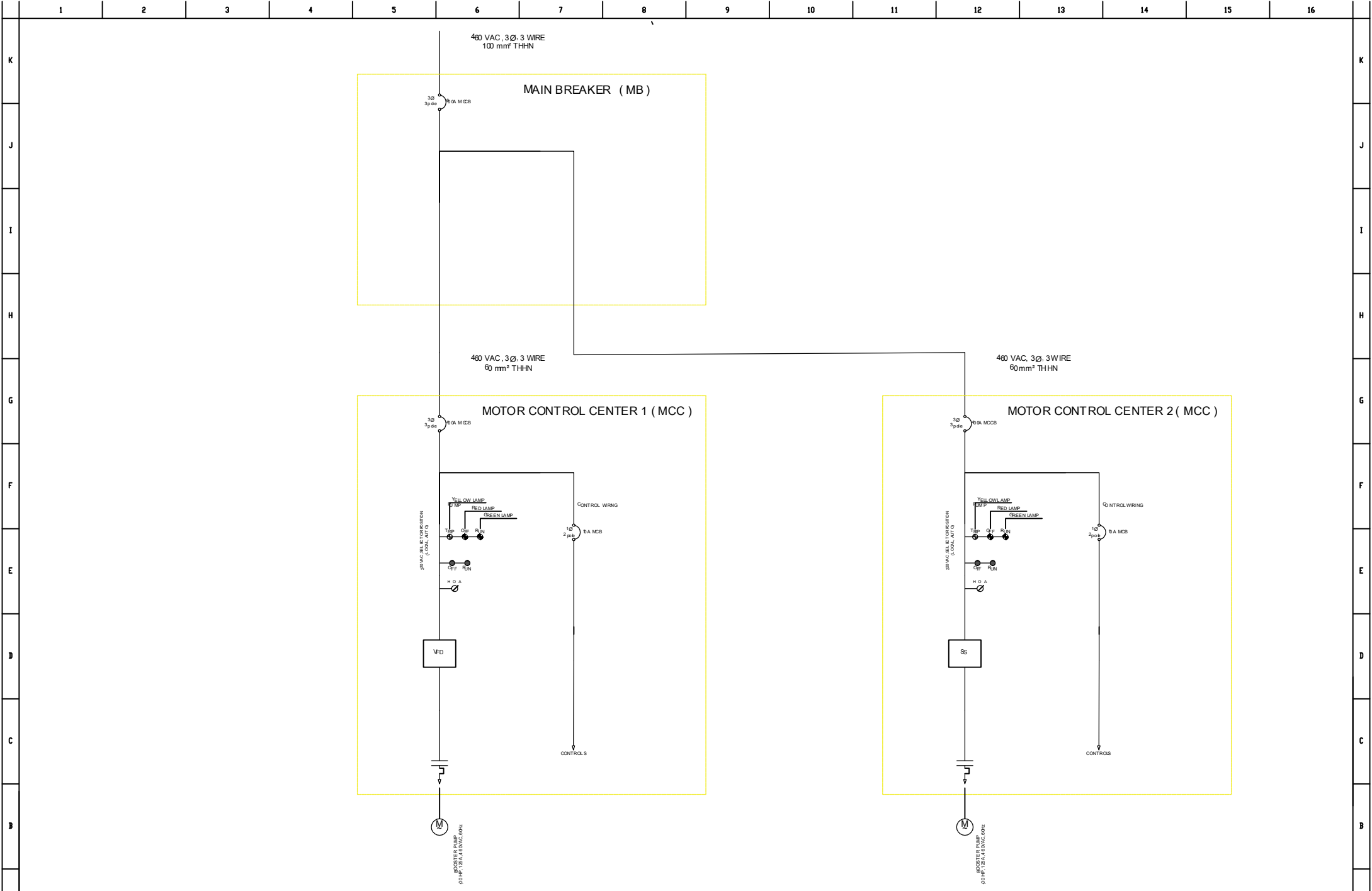
NORZAGARAY WATER DISTRICT
 1639 P. DELA MERCED ST., POBLACION, NORZAGARAY, BULACAN
 TEL/FAX: (044) 815-3964, E-MAIL: norzagaray_wd@yahoo.com


| | |
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| PROJECT | CONSTRUCTION OF NORZAGARAY WATER SUPPLY SYSTEM IMPROVEMENT PROJECT |
| LOCATION | MWSS SETTLING BASIN TO MBS MULTI PURPOSE HALL TO NORZAGARAY SAN JOSE ROAD & MATANDANG BARRIO |
| DESCRIPTION | ROAD BARANGAY BIGTE PIPELAYING OF 2.58 KM øPVC PIPES |
| SHT CONTENT | MOTOR CONTROL CENTER |

| | |
|--------------------|------------------------------|
| PREPARED BY | ENGR. JOHN BILLY A. SANTIAGO |
|--------------------|------------------------------|

| | |
|--------------------|---------------------|
| APPROVED BY | ENGR. AIMER B. CRUZ |
|--------------------|---------------------|

| | |
|-----------------------------|------------------------|
| SCALE | AS SHOWN (ACTUAL SIZE) |
| MOTOR CONTROL CENTER | |
| SHEET NO. | 17 OF 18 |



| | | | | | | | |
|--|---|--|---|---|-------------------------------------|----|----|
|  | NORZAGARAY WATER DISTRICT 1639 P. DELA MERCED ST., POBLACION, NORZAGARAY, BULACAN TEL/FAX: (044) 815-3964, E-MAIL: norzagaray_wd@yahoo.com | PROJECT CONSTRUCTION OF NORZAGARAY WATER SUPPLY SYSTEM IMPROVEMENT PROJECT | PREPARED BY ENGR. JOHN BILLY A. SANTIAGO | APPROVED BY ENGR. AIMER B. CRUZ | SCALE AS SHOWN (ACTUAL SIZE) | | |
| | | LOCATION MWSS SETTLING BASIN TO MBS MULTI PURPOSE HALL TO NORZAGARAY SAN JOSE ROAD & MATANDANG BARRIO | DESCRIPTION ROAD BARANGAY BIGTE PIPELAYING OF 2.58 KM ØPVC PIPES | SHT CONTENT MOTOR CONTROL CENTER | Motor Control Center | | |
| | | SHEET NO. | | | 18 | OF | 18 |