

- NOTES:-**
1. ALL EXISTING STORM WATER INLETS AND MANHOLES SHALL BE RECONSTRUCTED TO MATCH THE TOP OF THE FINISHED GROUND LEVEL.
 2. THE SHOWN EXISTING STORM WATER INLETS AND MANHOLES ARE AS PER DRAWINGS RECEIVED FROM GAM. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND COMPLETENESS AND ACCURACY OF THE EXISTING SYSTEM.
 3. THE PROPOSED STORM WATER NETWORK/ INLETS SHALL BE CONNECTED THE EXISTING STORM WATER NETWORK ACCORDING TO THE SITE CONDITIONS AND THE APPROVAL OF THE SITE ENGINEER.
 4. THE EXISTING STORM WATER PIPELINE (DWG. R-502) IS TO BE RELOCATED AND RECONSTRUCTED BY THE CONTRACTOR AND UPON THE APPROVAL OF THE SITE ENGINEER TO AVOID CONFLICT WITH THE BRIDGE FOUNDATIONS.
 5. THE EXISTING Ø800 STORM WATER PIPELINE (DWG. R-500) IS TO BE RECONSTRUCTED BY THE CONTRACTOR AND UPON THE SITE ENGINEER APPROVAL TO AVOID CONFLICT WITH THE BRIDGE WING WALLS FOUNDATIONS.
 6. THE PROPOSED EXISTING INLETS' CONNECTIONS TO THE RELOCATED STORM WATER PIPELINE ARE TO BE CHECKED BY THE CONTRACTOR AND IF NEEDED RECONSTRUCT THE INLETS ACCORDING TO THE SITE CONDITIONS AND THE APPROVAL OF THE SITE ENGINEER.
 7. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NOT TO DAMAGE ANY UNDERGROUND UTILITIES DURING EXCAVATION. IF ANY DAMAGE OCCURS, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIX THE DAMAGE AT HIS OWN EXPENSE. ANY UNDERGROUND UTILITIES FOUND SHALL BE PROPERLY PROTECTED OR DIVERTED, IN COORDINATION WITH RELEVANT AUTHORITIES .
 8. IT IS THE CONTRACTOR RESPONSIBILITY TO OBTAIN THE EXACT POSITION OF THE DIFFERENT UTILITIES IN ORDER TO AVOID DAMAGE DURING CONSTRUCTION.

- LEGEND:-**
- PROPOSED INLETS CONNECTIONS - Ø300 mm PIPELINES - TO THE RELOCATED STORM WATER PIPELINE
 - PROPOSED RELOCATED STORM WATER PIPELINE Ø400 mm
 - PROPOSED RELOCATED STORM WATER PIPELINE Ø600 mm
 - EXISTING STORM WATER NETWORK
 - EXISTING WASTEWATER NETWORK
 - PROPOSED STORM WATER INLET
 - PROPOSED STORM WATER MANHOLE
 - EXISTING STORM WATER INLET
 - EXISTING WASTEWATER OR STORM WATER MANHOLE

Purpose Of Issue	Rev.	Date	Approved
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Client:



أمانة
عمان
الكبرى

GREATER AMMAN MUNICIPALITY

Project:
STRUCTURAL DESIGN SERVICES FOR
AMMAN BRT

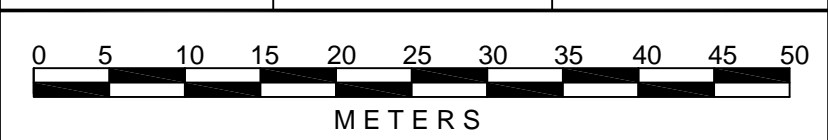
Package:
PRESS TUNNEL

Title:
DRAINAGE LAYOUT PLAN

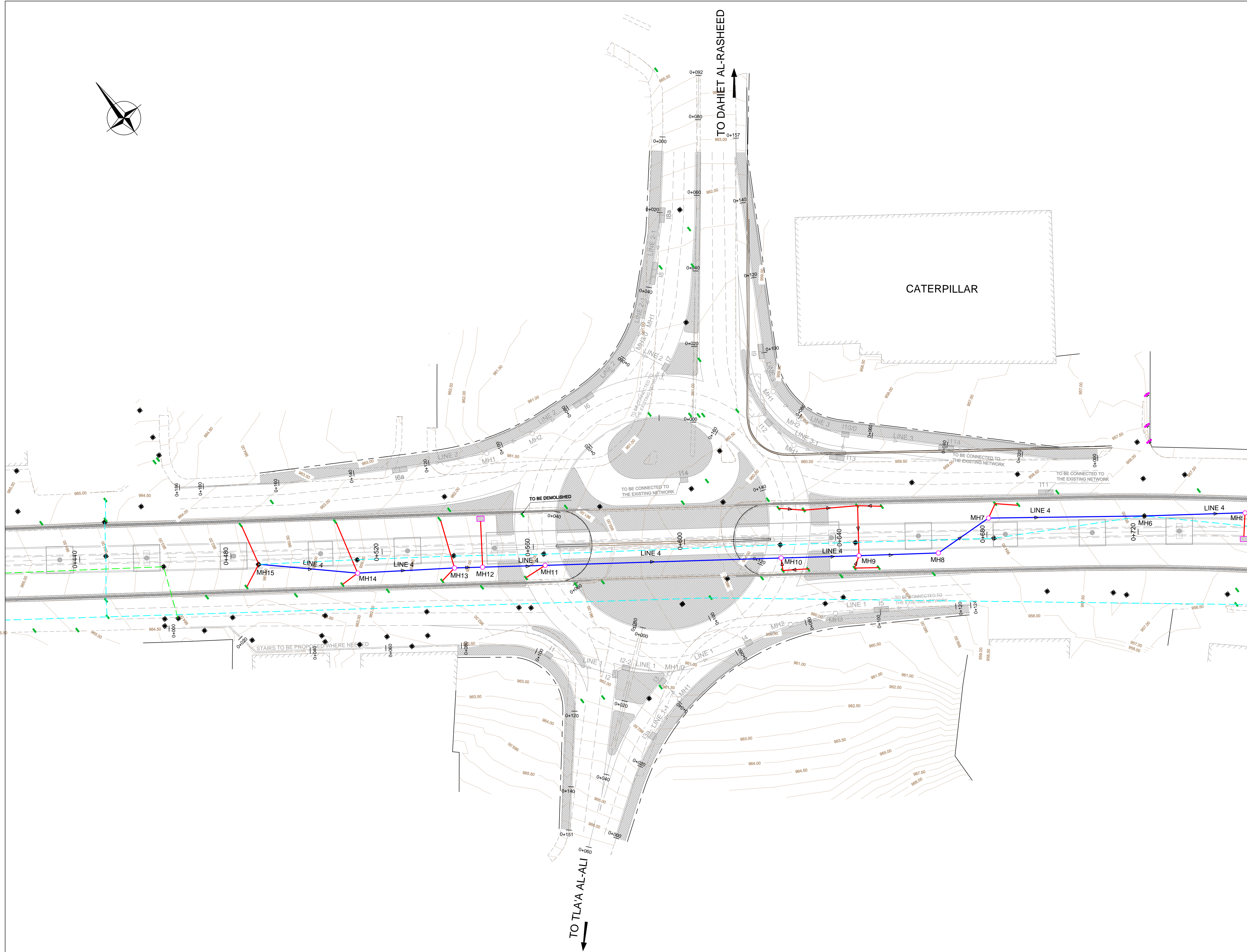
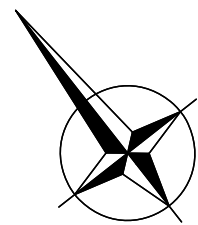
Consultant:



Design: S.H.	Drawn by: CAD	Checked: H.A.
Scale: 1:500	Date: NOV. 2016	Approved: W.Z.



Drawing Number: R-500	Rev.: 0
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- NOTES:-
1. ALL EXISTING STORM WATER INLETS AND MANHOLES SHALL BE RECONSTRUCTED TO MATCH THE TOP OF THE FINISHED GROUND LEVEL.
 2. THE SHOWN EXISTING STORM WATER INLETS AND MANHOLES ARE AS PER DRAWINGS RECEIVED FROM GAM. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND COMPLETENESS AND ACCURACY OF THE EXISTING SYSTEM.
 3. THE PROPOSED STORM WATER NETWORK/ INLETS SHALL BE CONNECTED THE EXISTING STORM WATER NETWORK ACCORDING TO THE SITE CONDITIONS AND THE APPROVAL OF THE SITE ENGINEER.
 4. THE EXISTING STORM WATER PIPELINE (DWG. R-502) IS TO BE RELOCATED AND RECONSTRUCTED BY THE CONTRACTOR AND UPON THE APPROVAL OF THE SITE ENGINEER TO AVOID CONFLICT WITH THE BRIDGE FOUNDATIONS.
 5. THE EXISTING Ø800 STORM WATER PIPELINE (DWG. R-500) IS TO BE RECONSTRUCTED BY THE CONTRACTOR AND UPON THE SITE ENGINEER APPROVAL TO AVOID CONFLICT WITH THE BRIDGE WING WALLS FOUNDATIONS.
 6. THE PROPOSED EXISTING INLETS' CONNECTIONS TO THE RELOCATED STORM WATER PIPELINE ARE TO BE CHECKED BY THE CONTRACTOR AND IF NEEDED RECONSTRUCT THE INLETS ACCORDING TO THE SITE CONDITIONS AND THE APPROVAL OF THE SITE ENGINEER.
 7. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NOT TO DAMAGE ANY UNDERGROUND UTILITIES DURING EXCAVATION. IF ANY DAMAGE OCCURS, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIX THE DAMAGE AT HIS OWN EXPENSE. ANY UNDERGROUND UTILITIES FOUND SHALL BE PROPERLY PROTECTED OR DIVERTED, IN COORDINATION WITH RELEVANT AUTHORITIES .
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- PROPOSED INLETS CONNECTIONS - Ø300 mm PIPELINES - TO THE RELOCATED STORM WATER PIPELINE
 - PROPOSED RELOCATED STORM WATER PIPELINE Ø400 mm
 - PROPOSED RELOCATED STORM WATER PIPELINE Ø600 mm
 - EXISTING STORM WATER NETWORK
 - EXISTING WASTEWATER NETWORK
 - PROPOSED STORM WATER INLET
 - PROPOSED STORM WATER MANHOLE
 - EXISTING STORM WATER INLET
 - EXISTING WASTEWATER OR STORM WATER MANHOLE

Purpose Of Issue	Rev.	Date	Approved
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GREATER AMMAN MUNICIPALITY

Project:

STRUCTURAL DESIGN SERVICES FOR
AMMAN BRT

Package:

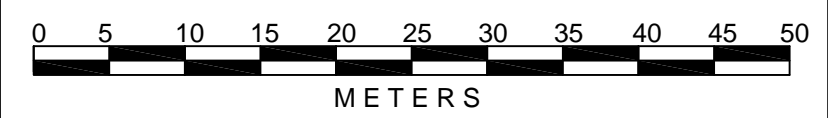
PRESS TUNNEL

Title:

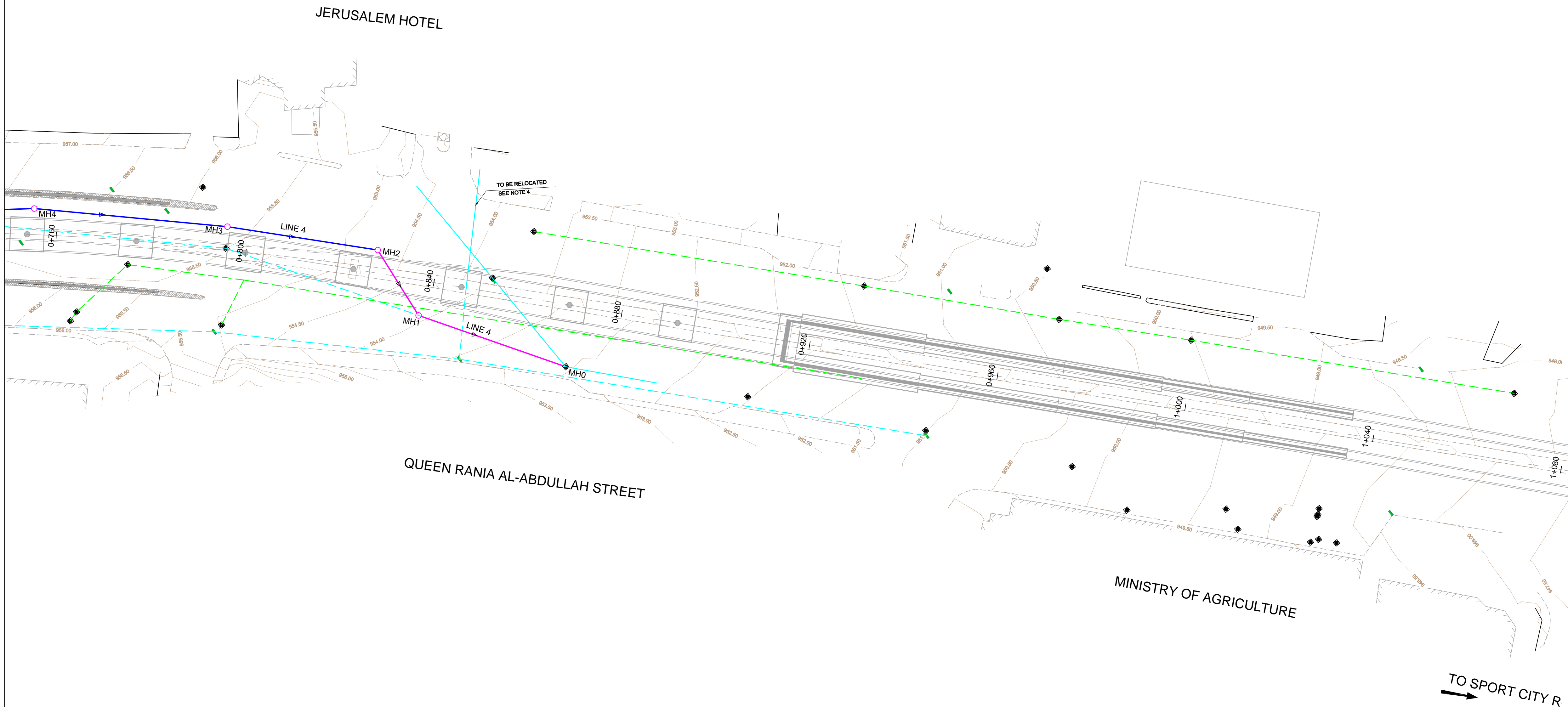
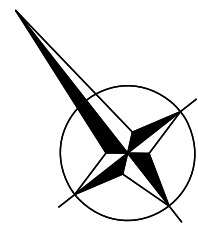
DRAINAGE LAYOUT PLAN
(UNDERPASS AREA)



Design:	Drawn by:	Checked:
S.H.	CAD	H.A.
Scale:	Date:	Approved:
1:500	NOV. 2016	W.Z.



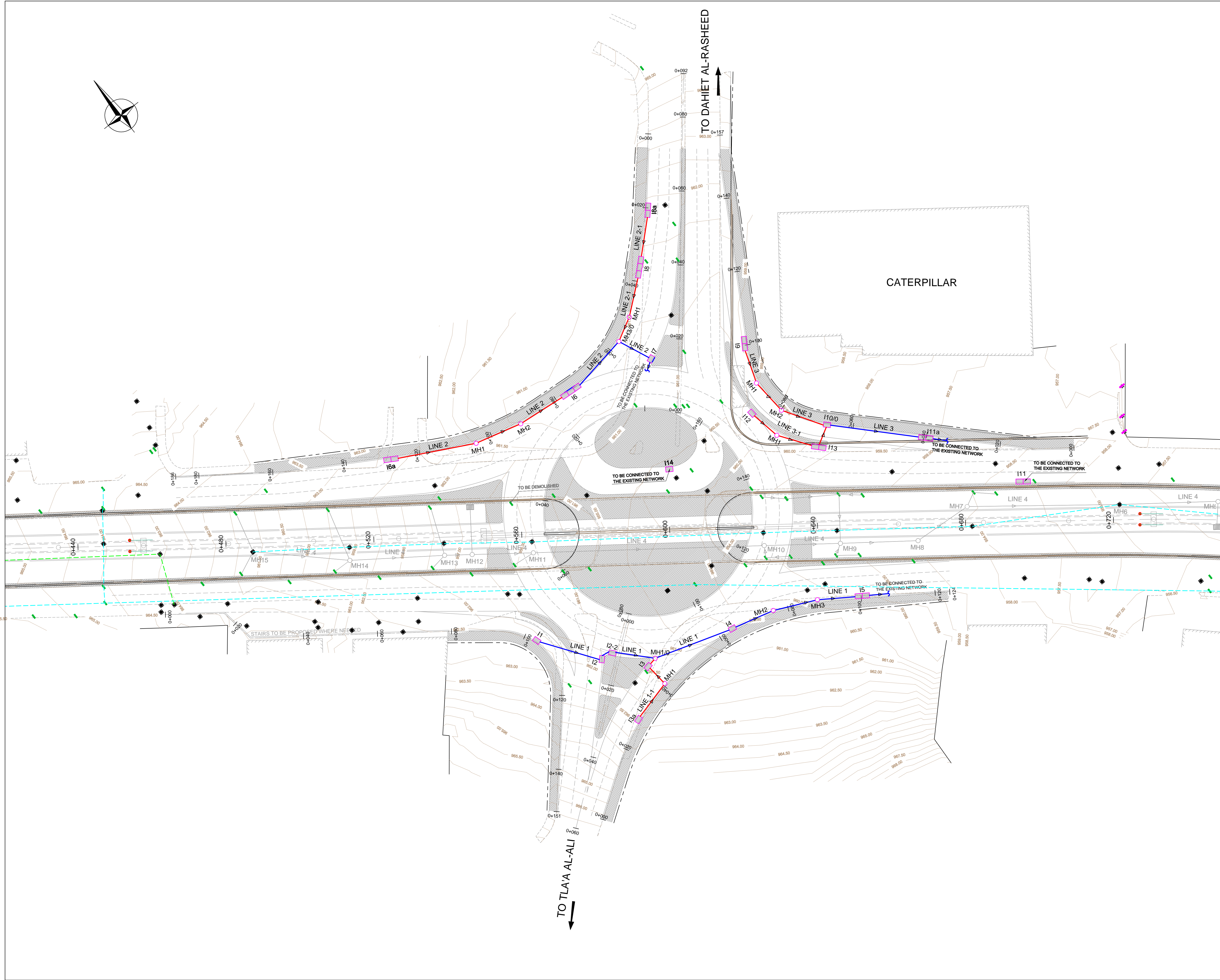
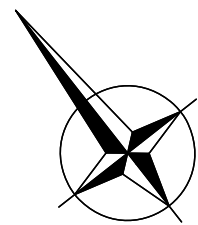
Drawing Number:	Rev.:
R-501	0



- NOTES:-**
1. ALL EXISTING STORM WATER INLETS AND MANHOLES SHALL BE RECONSTRUCTED TO MATCH THE TOP OF THE FINISHED GROUND LEVEL.
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 - PROPOSED RELOCATED STORM WATER PIPELINE Ø400 mm
 - PROPOSED RELOCATED STORM WATER PIPELINE Ø600 mm
 - EXISTING STORM WATER NETWORK
 - EXISTING WASTEWATER NETWORK
 - PROPOSED STORM WATER INLET
 - PROPOSED STORM WATER MANHOLE
 - EXISTING STORM WATER INLET
 - EXISTING WASTEWATER OR STORM WATER MANHOLE

Purpose Of Issue		Rev.	Date	Approved
Client:				
<div><div>أمانة عمّان الكبرى</div><div></div></div> <div>GREATER AMMAN MUNICIPALITY</div>				
Project:				
STRUCTURAL DESIGN SERVICES FOR AMMAN BRT				
Package:				
PRESS TUNNEL				
Title:				
DRAINAGE LAYOUT PLAN				
Consultant:				
<div><div> steer davis gleave</div><div> engicon</div></div>				
Design:		Drawn by:		Checked:
S.H.		CAD		H.A.
Scale:		Date:		Approved:
1:500		NOV. 2016		W.Z.
<div><div><div>0</div><div>5</div><div>10</div><div>15</div><div>20</div><div>25</div><div>30</div><div>35</div><div>40</div><div>45</div><div>50</div></div><div>METERS</div></div>				
Drawing Number:				Rev.:
R-502				0



- NOTES:-
1. ALL EXISTING STORM WATER INLETS AND MANHOLES SHALL BE RECONSTRUCTED TO MATCH THE TOP OF THE FINISHED GROUND LEVEL.
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- LEGEND:-
- PROPOSED STORM WATER PIPELINE Ø300 mm
 - PROPOSED STORM WATER PIPELINE Ø400 mm
 - - - EXISTING STORM WATER NETWORK
 - - - EXISTING WASTEWATER NETWORK
 - PROPOSED STORM WATER INLET
 - PROPOSED STORM WATER MANHOLE
 - EXISTING STORM WATER INLET
 - EXISTING WASTEWATER OR STORM WATER MANHOLE

Purpose Of Issue	Rev.	Date	Approved

Client:



GREATER AMMAN MUNICIPALITY

Project:

STRUCTURAL DESIGN SERVICES FOR
AMMAN BRT

Package:

PRESS TUNNEL

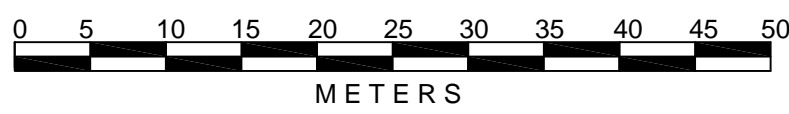
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DRAINAGE LAYOUT PLAN
(ROUNDAABOUT AREA)

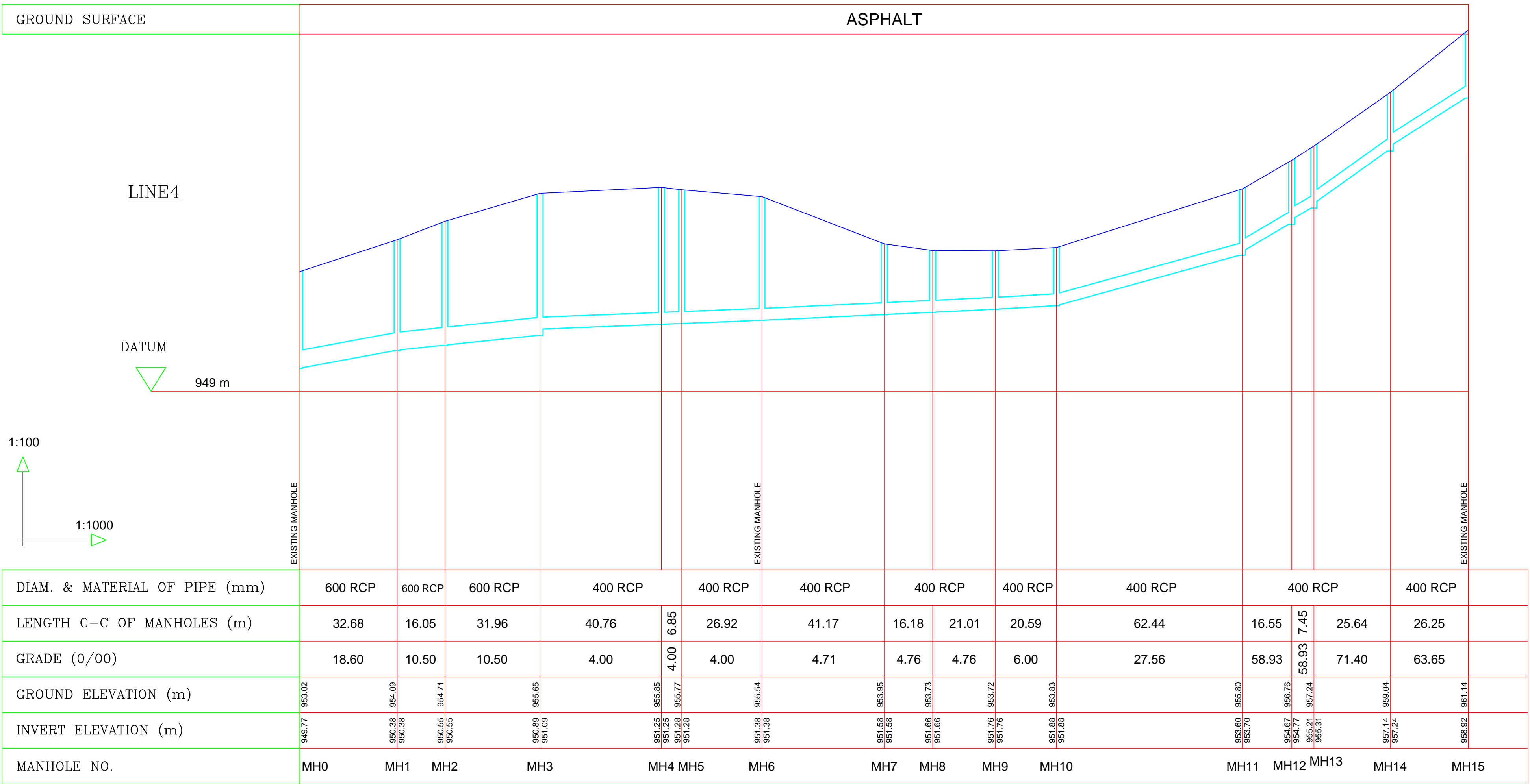
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Design:	Drawn by:	Checked:
S.H.	CAD	H.A.
Scale:	Date:	Approved:
1:500	NOV. 2016	W.Z.



Drawing Number:	Rev.:
R-503	0



NOTES:-

1. THE CONTRACTOR SHALL CHECK THE INVERT LEVELS AND THE DIAMETERS FOR THE RELOCATED STORM WATER PIPELINE ACCORDING TO THE EXISTING PIPELINE INVERT LEVELS AND DIAMETERS, SITE CONDITIONS AND UPON APPROVAL OF THE SITE ENGINEER.

Purpose Of Issue	Rev.	Date	Approved
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Client:



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عمّان
الكبرى

GREATER AMMAN MUNICIPALITY

Project:

STRUCTURAL DESIGN SERVICES FOR
AMMAN BRT

Package:

PRESS TUNNEL

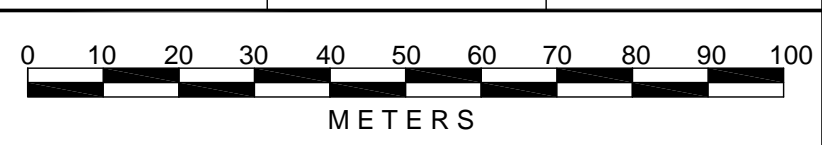
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DRAINAGE PROFILE
LINE - 4
(RELOCATED PIPELINE)

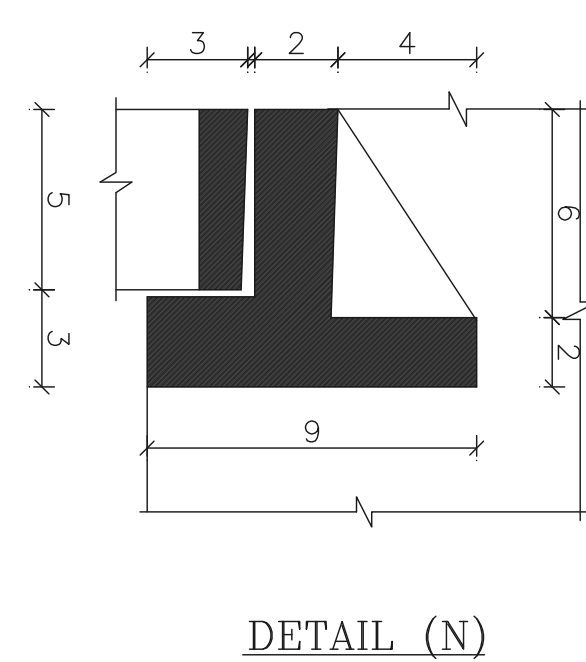
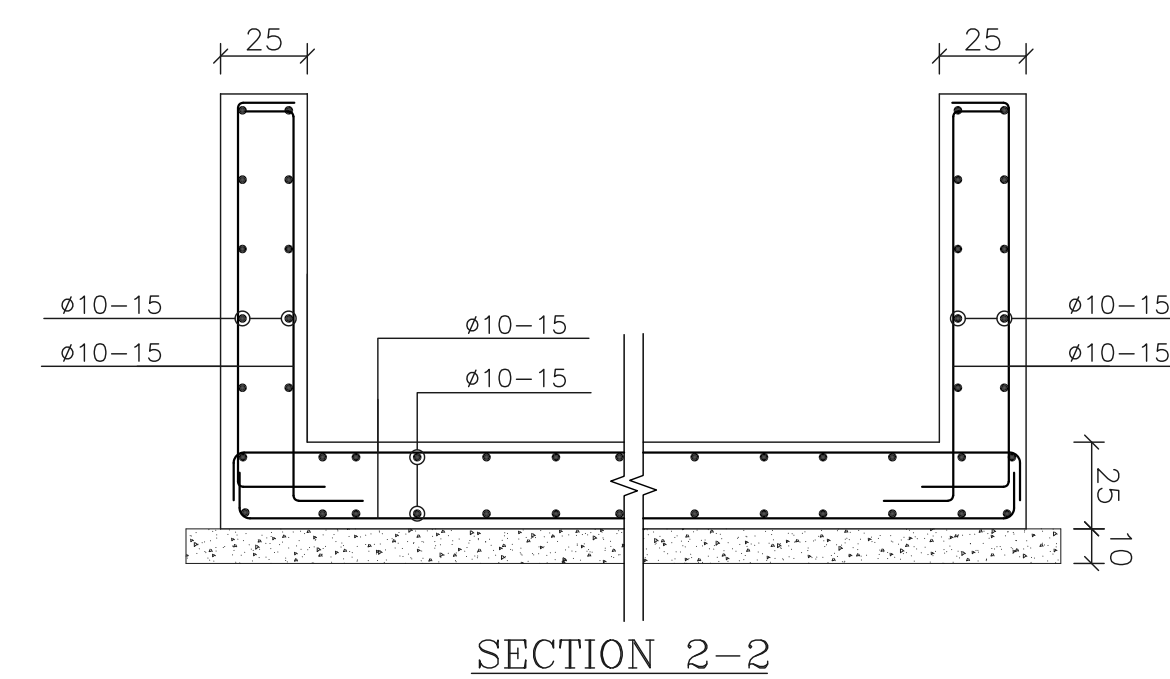
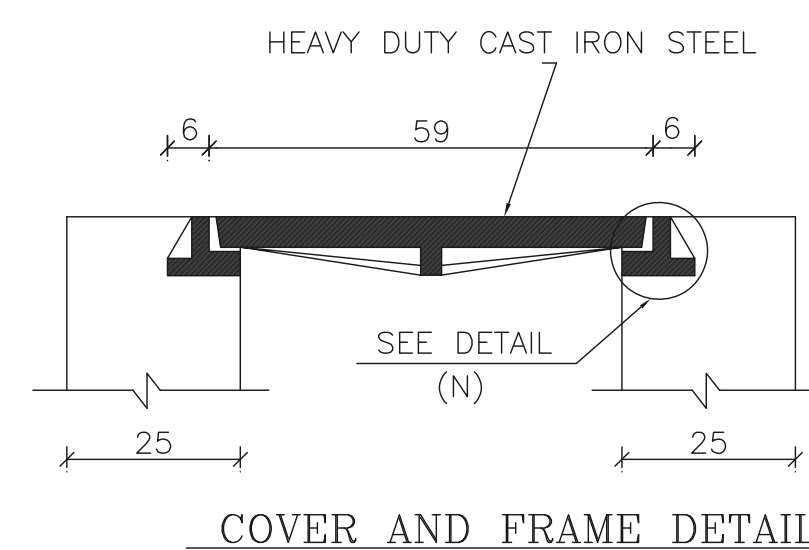
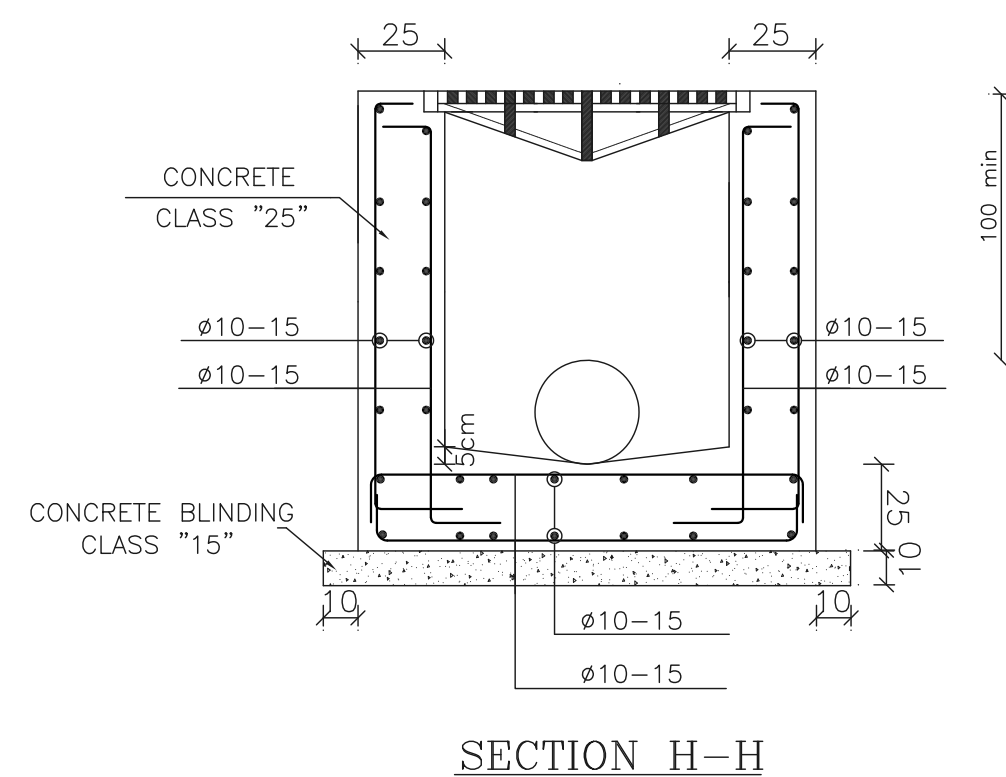
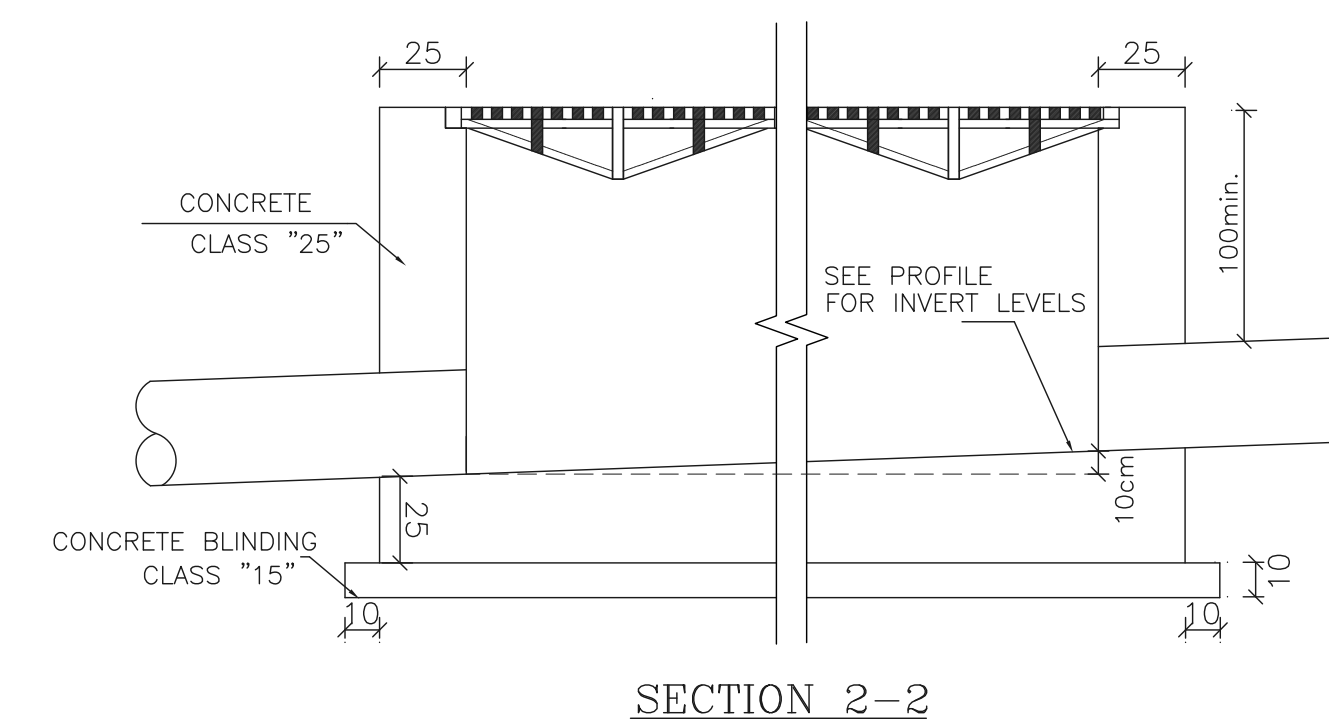
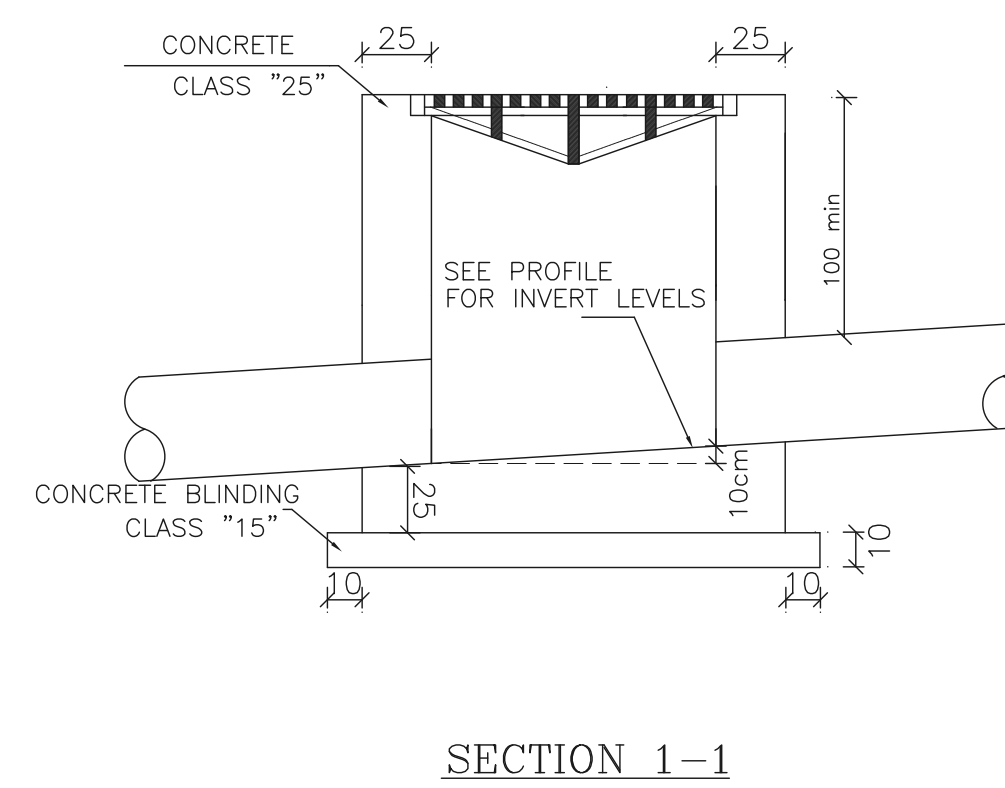
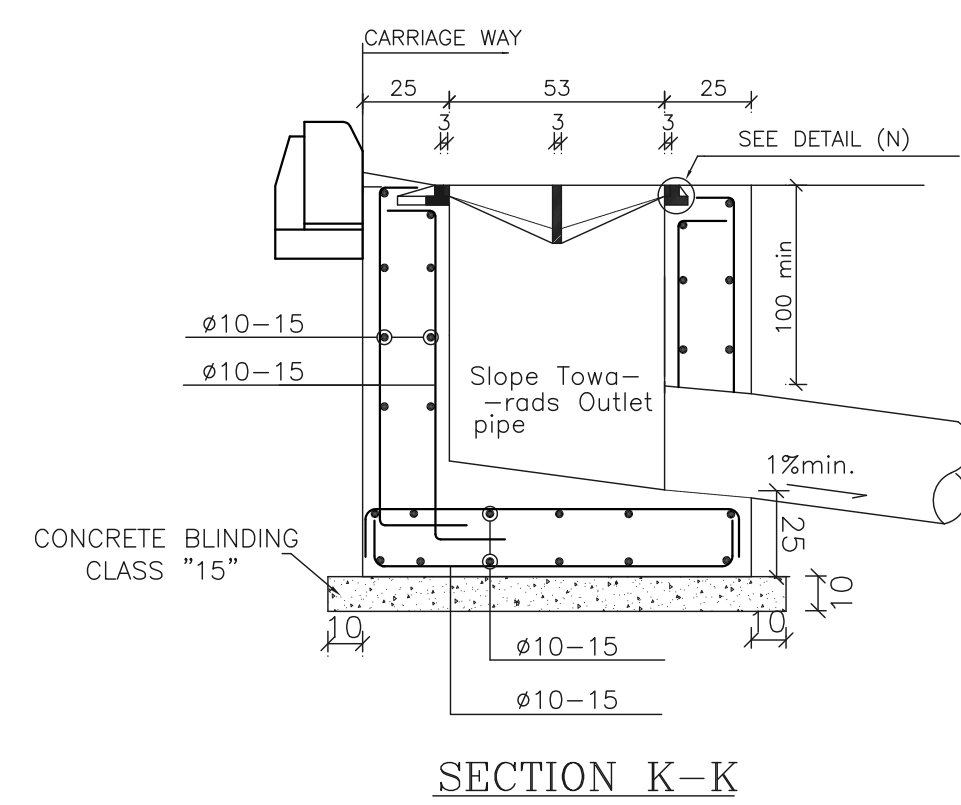
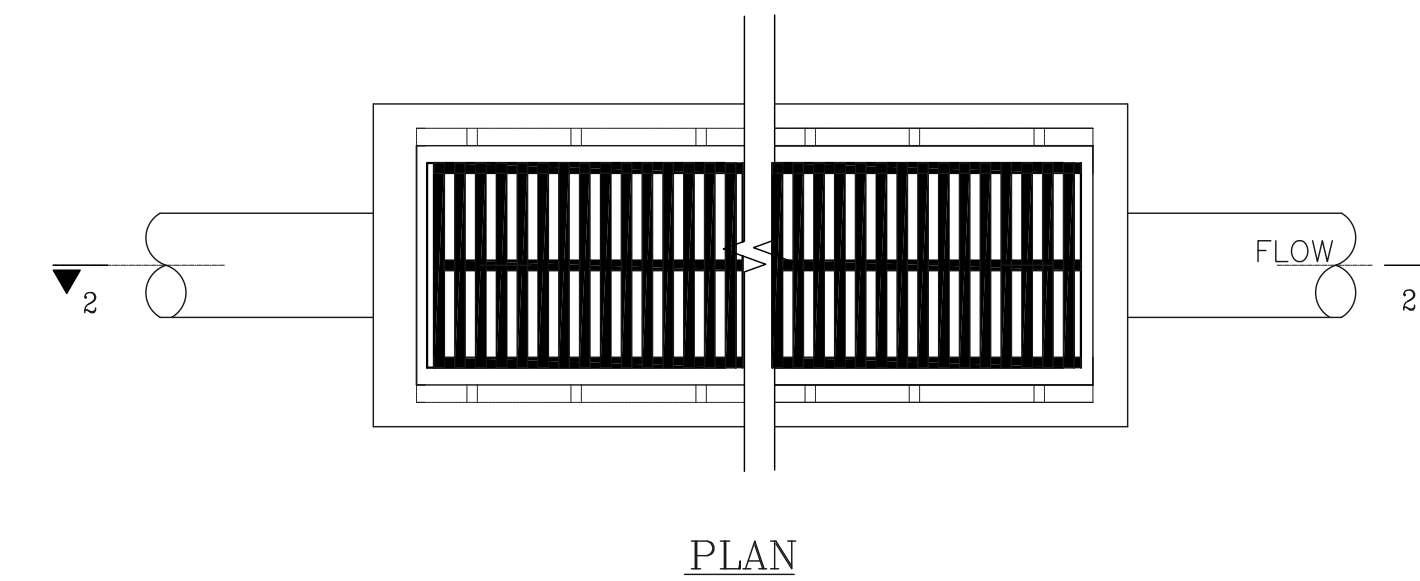
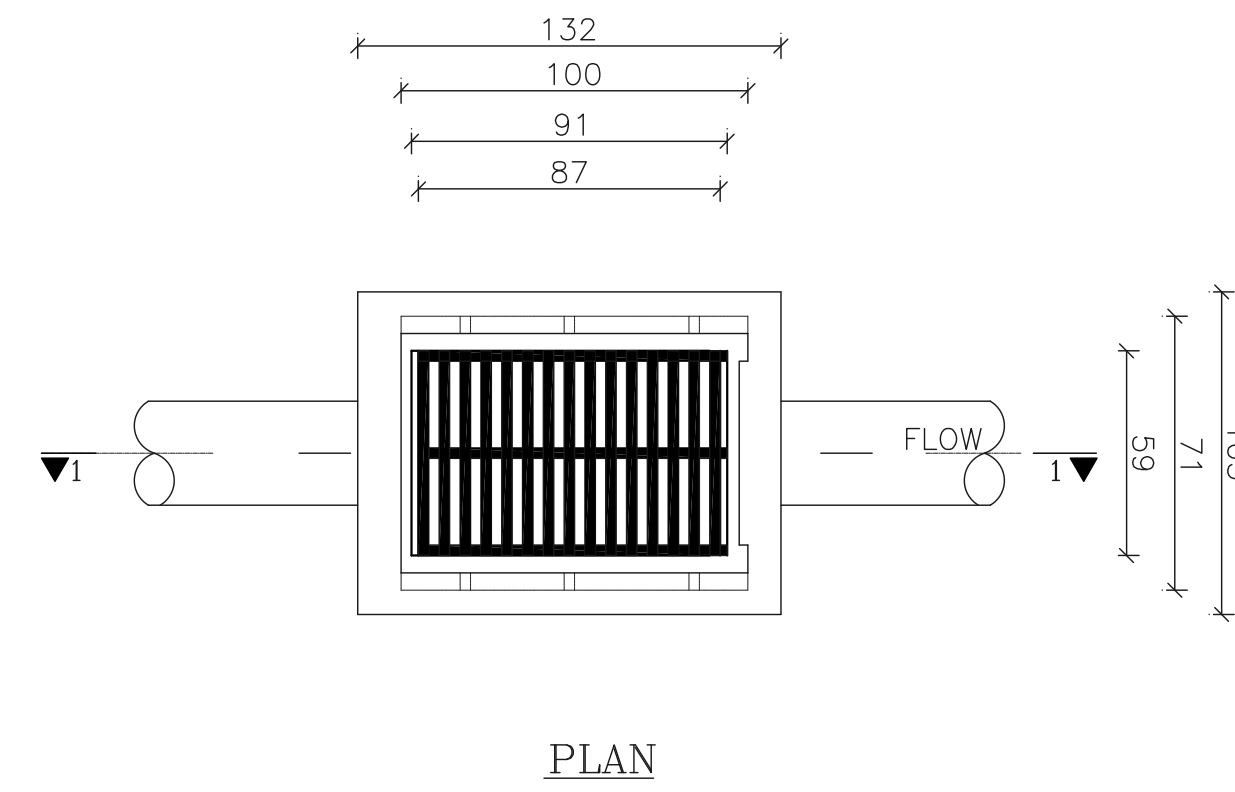
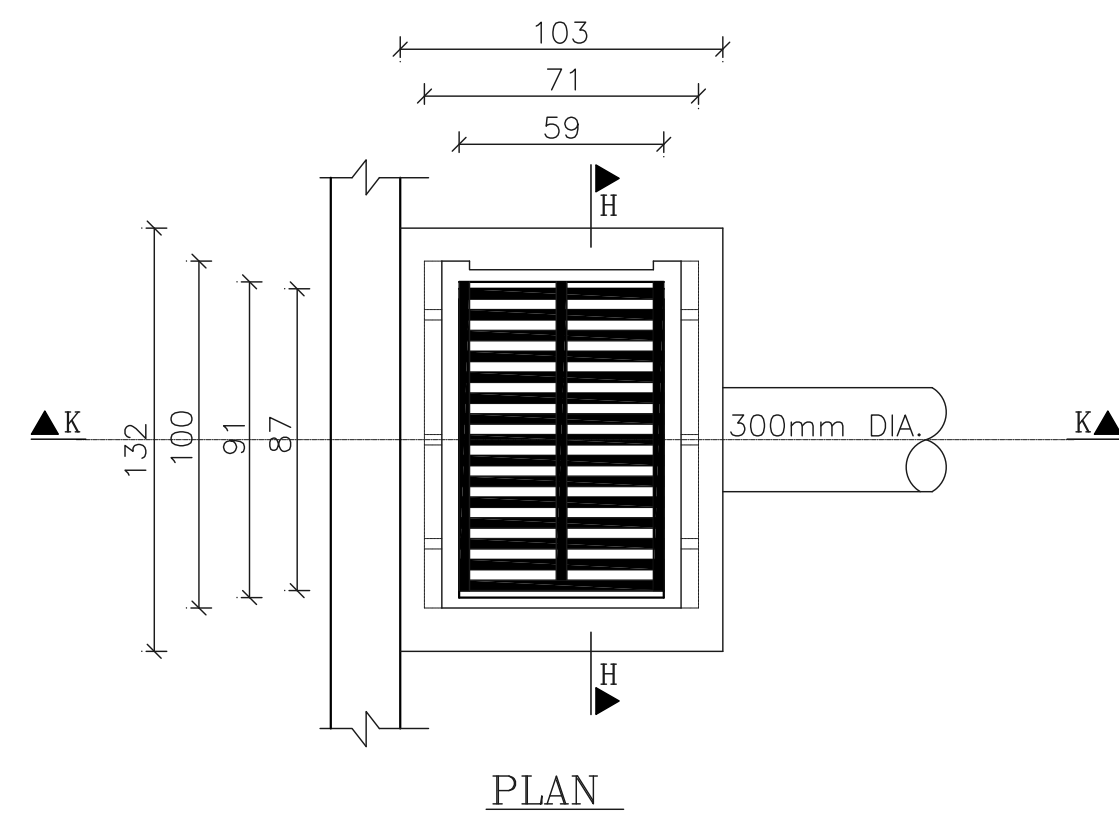
Consultant:



Design: S.H.	Drawn by: CAD	Checked: H.A.
Scale: 1:1000	Date: DEC. 2016	Approved: W.Z.



Drawing Number:	Rev.:
R-521	0



NOTES:-

1. UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE IN CENTIMETERS.

2. ALL REINFORCEMENT BARS ARE GIVEN IN MILLIMETERS.

3. FOR INLETS INVERT LEVELS REFER TO PROFILES
DWG. R-520

Purpose Of Issue	Rev.	Date	Approved

Client:



GREATER AMMAN MUNICIPALITY

Project:

STRUCTURAL DESIGN SERVICES FOR
AMMAN BRT

Package:

PRESS TUNNEL

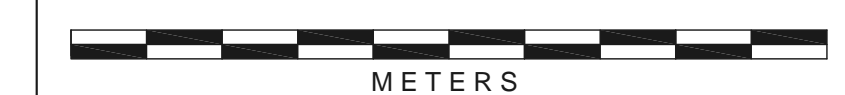
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STORM WATER INLETS DETAILS

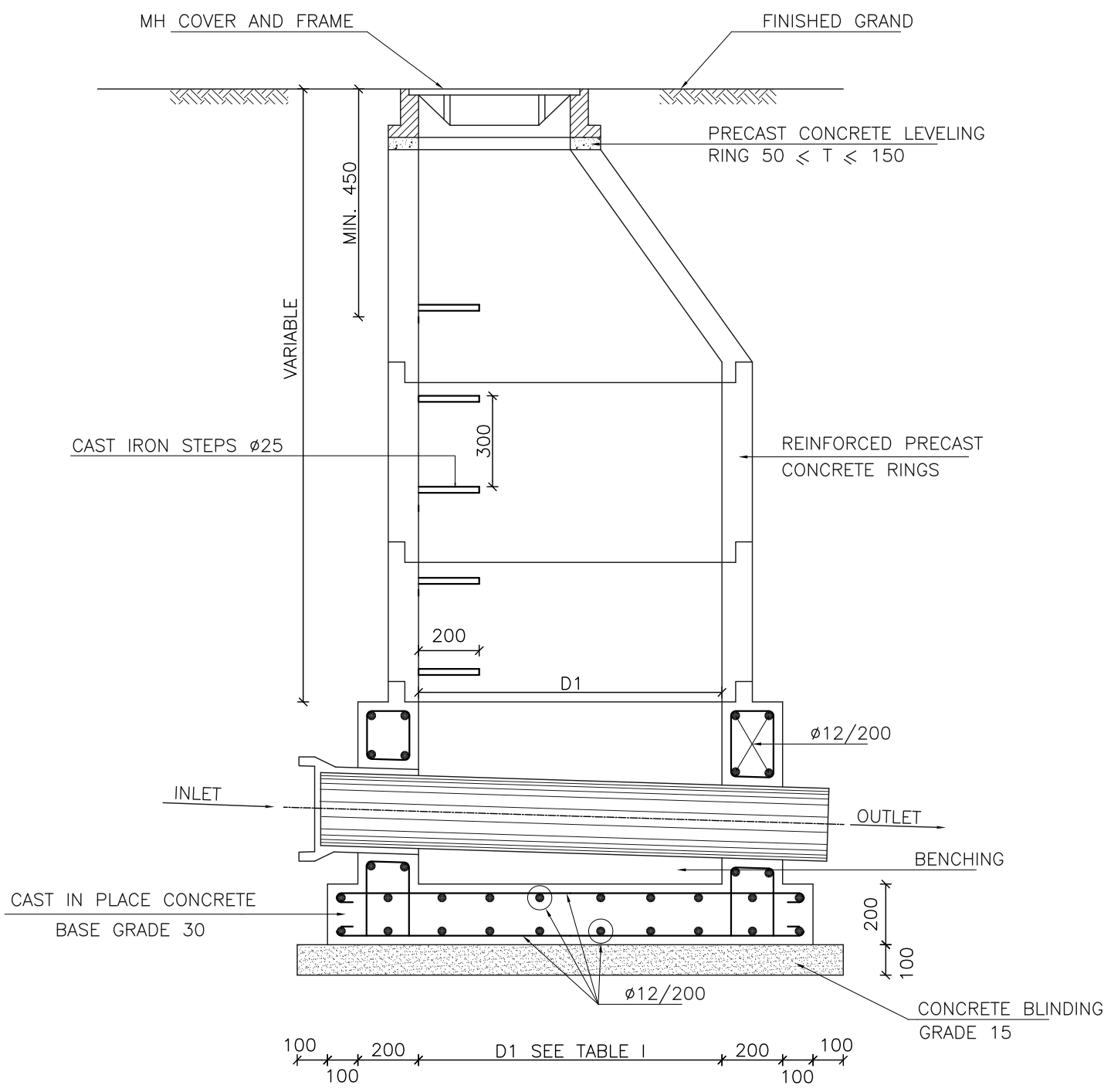
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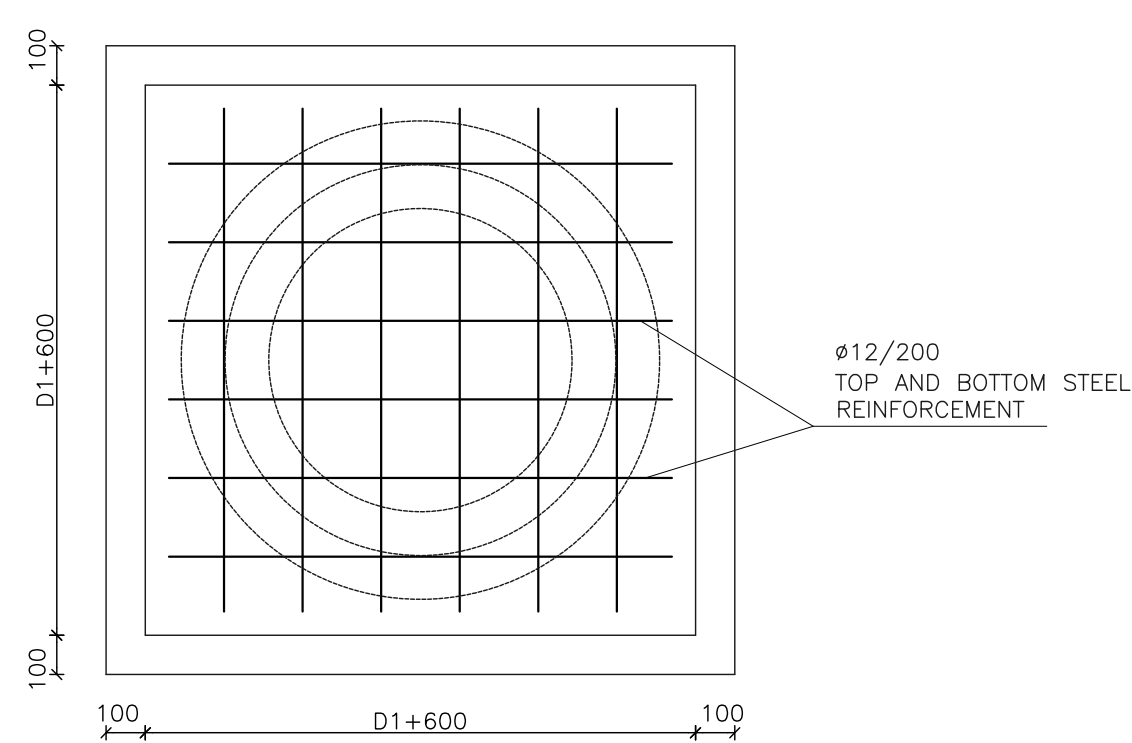
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Scale: N.T.S	Date: DEC. 2016	Approved: W.Z.



Drawing Number:	Rev.:
R-550	0



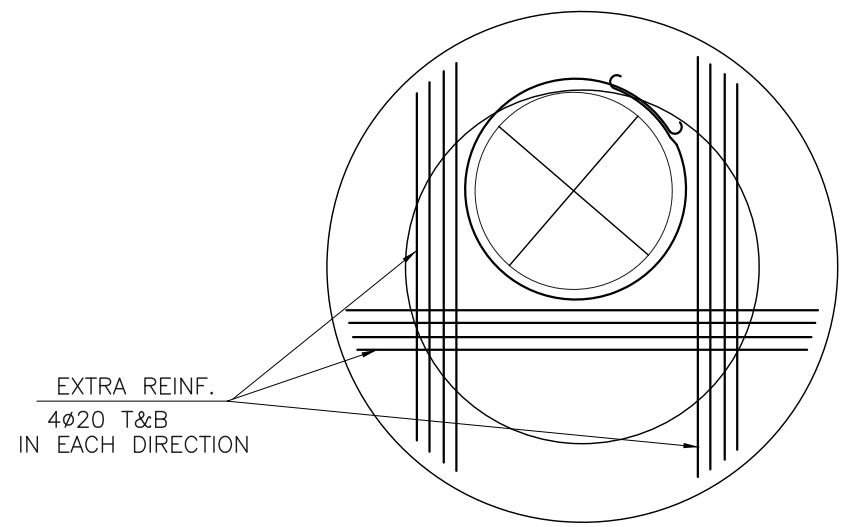
TYPICAL PRECAST MANHOLE DETAIL
N.T.S.



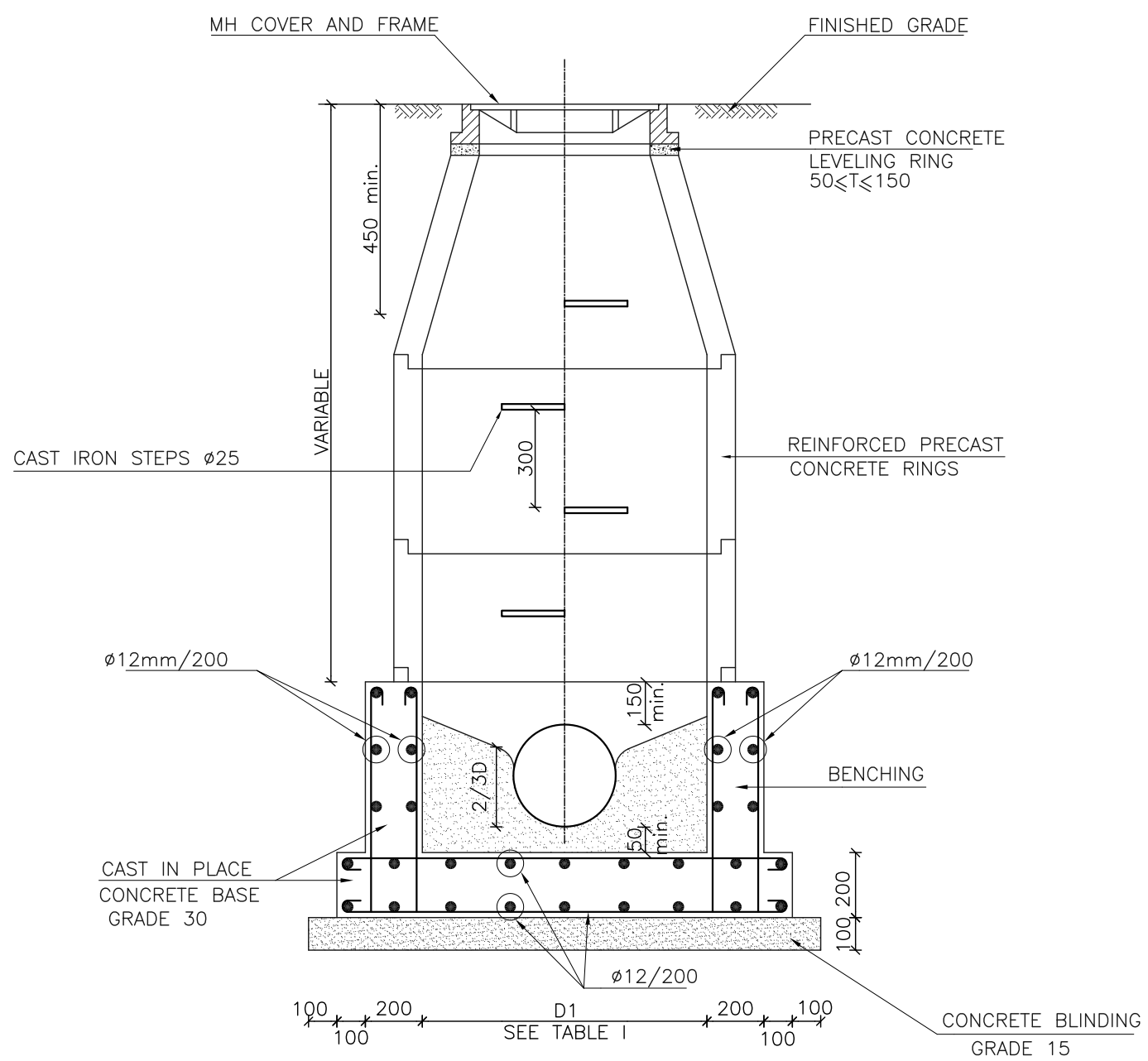
PLAN
CAST IN SITU BASE
N.T.S.

TABLE I :

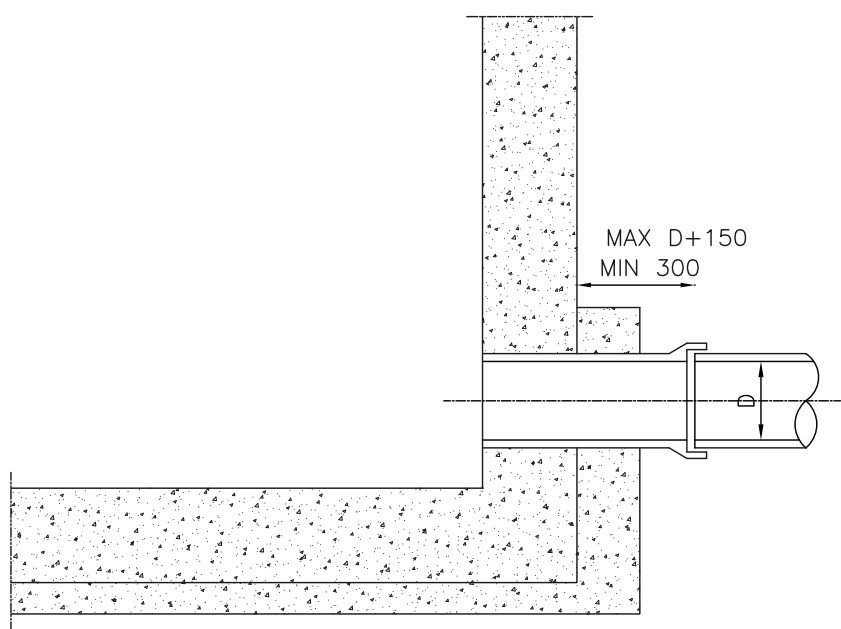
TABLE OF REQUIRED MIN. MANHOLE SIZES	
PIPE DIAMETER (D) (mm)	INTERNAL MANHOLE DIAMETER (D1) (mm)
300	900 PRE-CAST
400	1000 PRE-CAST



EXTRA REINF. FOR
OPENING
N.T.S.



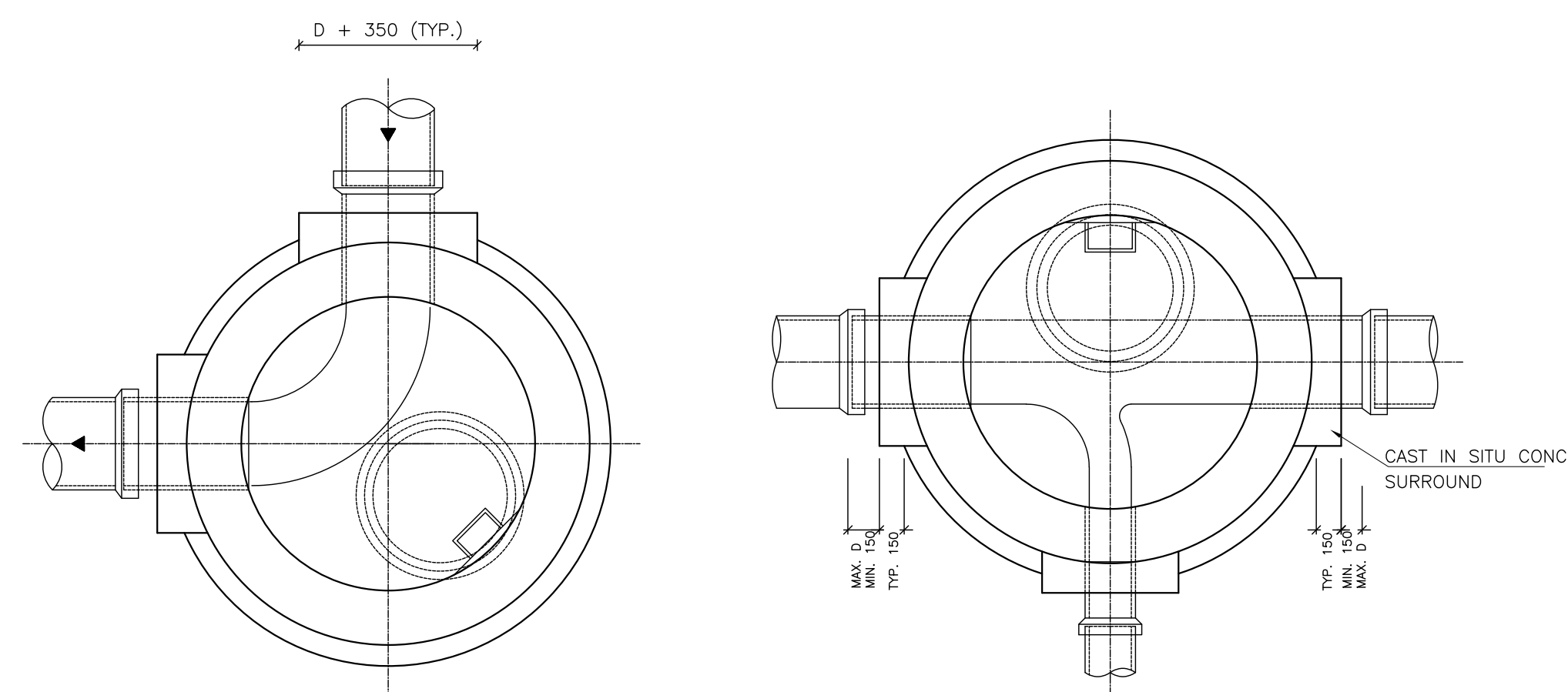
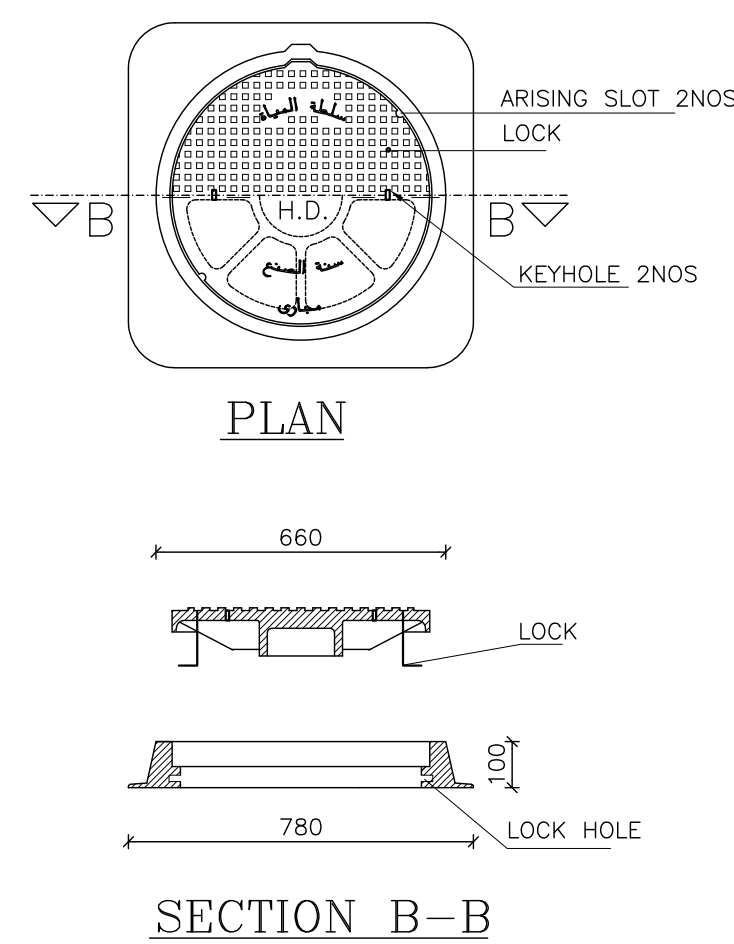
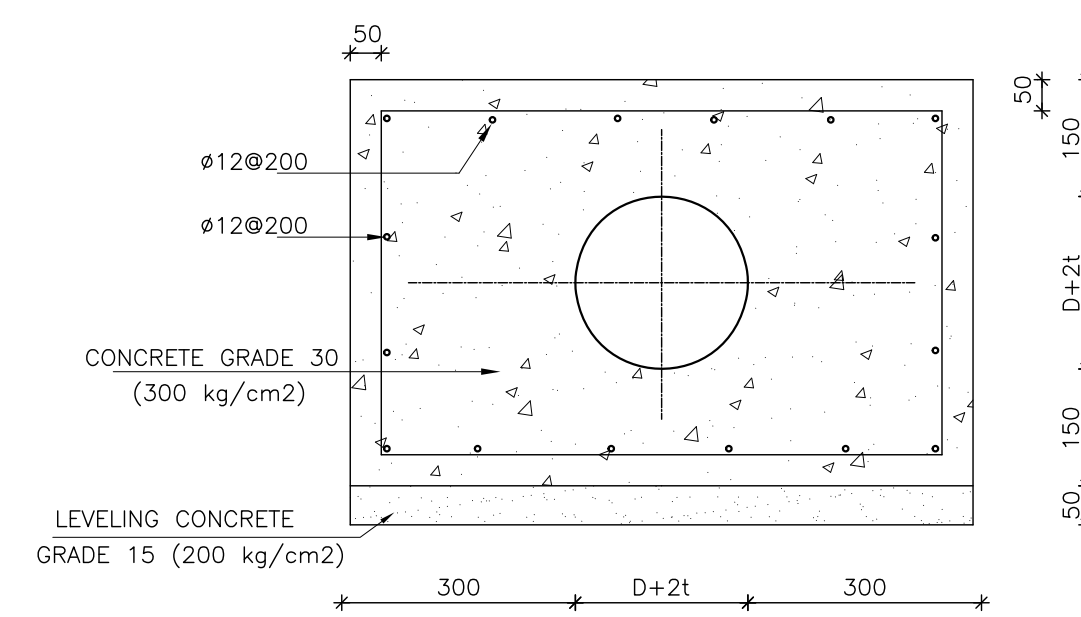
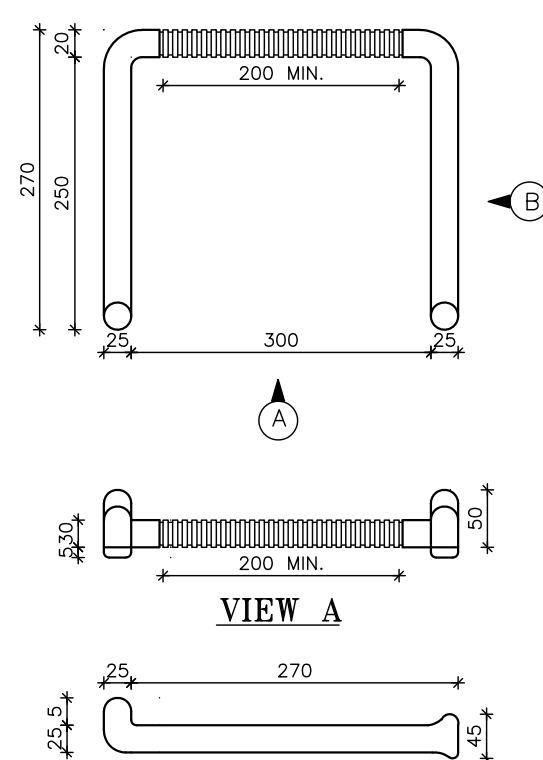
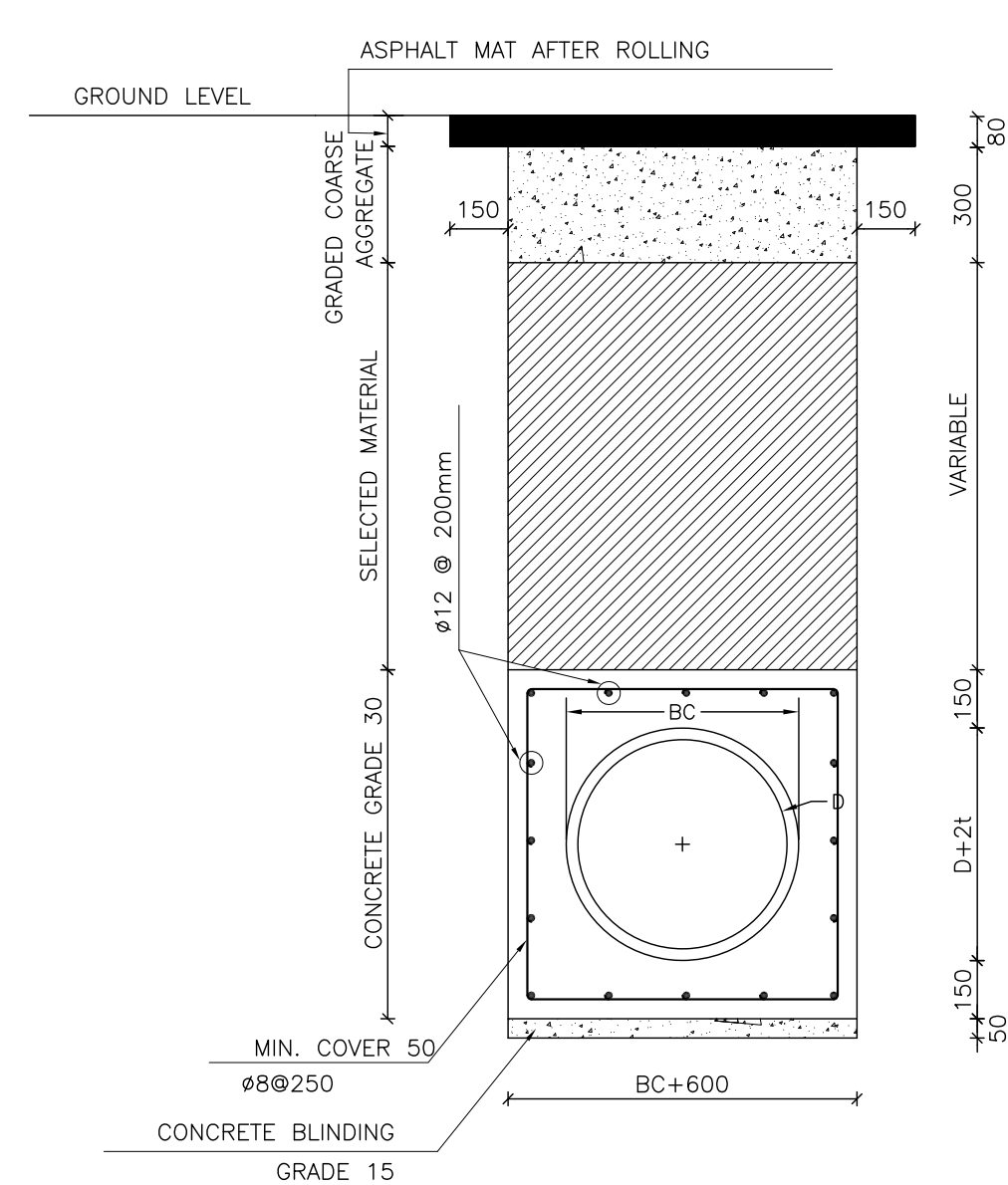
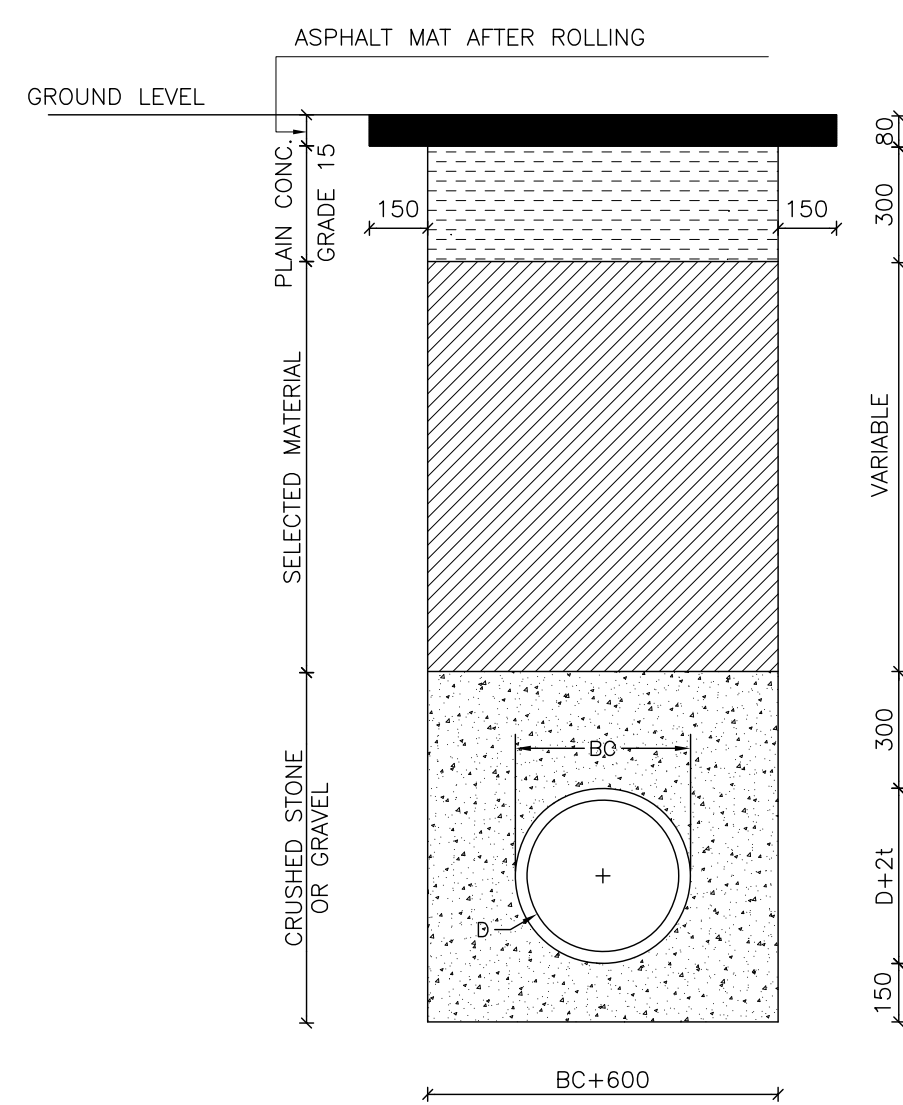
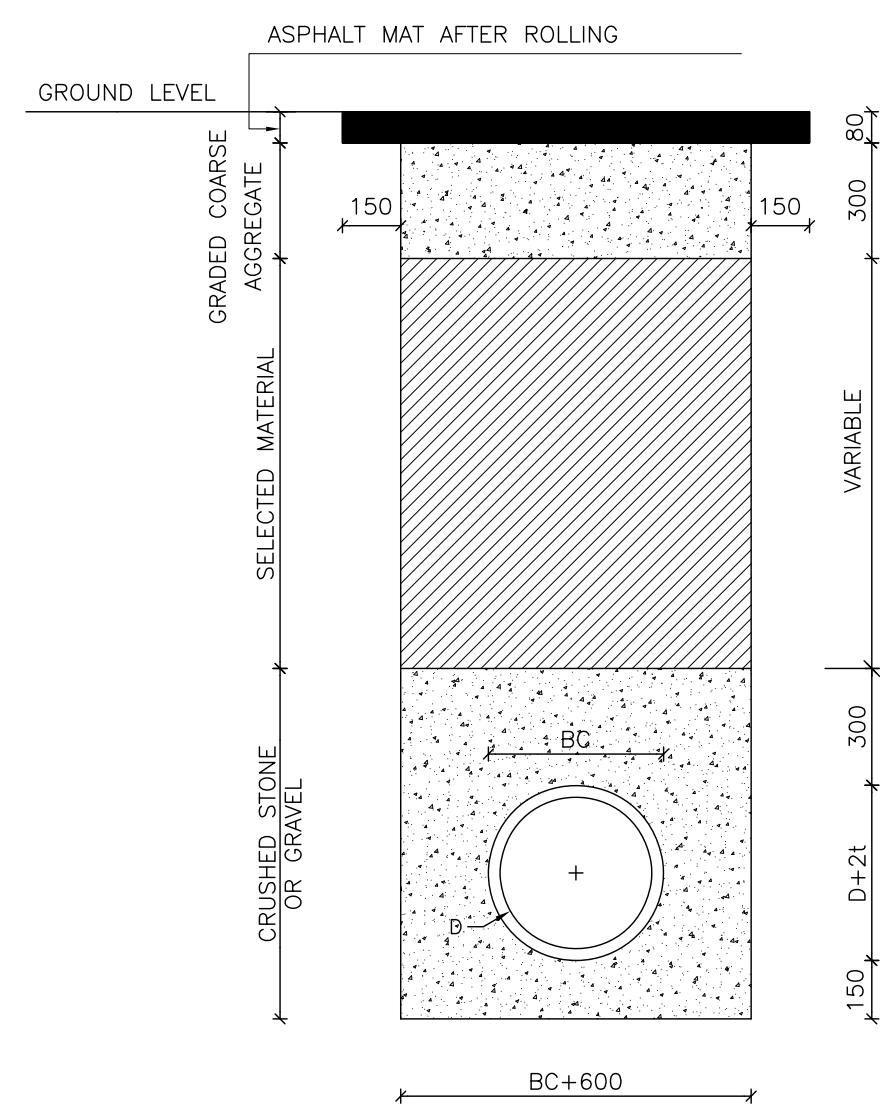
TYPICAL PRECAST MANHOLE DETAIL
N.T.S.



COUPLING AT MANHOLE JUNCTION
FOR CONCRETE PIPES
N.T.S.

- NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
 2. REINFORCED CONCRETE ENCASEMENT TO BE PROVIDED GENERALLY FOR PIPES WITH COVER LESS THAN 1000 mm OR MORE THAN 4500 mm .
 3. MINIMUM MANHOLE DIAMETER SHOULD BE INCREASED 100 mm FOR EACH CONNECTION INCREASE ABOVE THE THREE INLETS CONNECTED TO THE MANHOLE .
 4. ALL REINFORCED CONCRETE SHALL BE OF GRADE 30
 5. ALL BENCHING SHALL BE OF GRADE 30 CONCRETE .
 6. GENERAL NOTES
THIS DRAWING SHOWS GENERAL MANHOLE DETAILS AND CONSTRUCTION REQUIREMENTS. THE PRECISE DETAIL OF EACH MANHOLE DEPENDS ON THE LOCATION,ORIENTATION AND LEVELS OF PIPELINE CONNECTIONS.
FOR EACH MANHOLE CONSTRUCTION IS TO BE GIVEN TO THE FOLLOWING:-
(A) THE ORIENTATION OF THE MAIN PIPELINES,(THESE MAY OFFSET BY UP TO 100 MM TO INCREASE BENCHING AREA (BELOW ACCESS OPENING).
(B) THE ORIENTATION OF THE ACCESS OPENING TO BEST SUIT THE BENCHING.
(C) THE NUMBER OF CORRALLING (PRECAST RING) COURSES AND THE COVER LEVEL.
(B) THE ORIENTATION AND EXACT LEVEL OF EACH BRANCH. AND BACKDROP CONNECTION.

Purpose Of Issue	Rev.	Date	Approved
Client: <div></div> GREATER AMMAN MUNICIPALITY			
Project: STRUCTURAL DESIGN SERVICES FOR AMMAN BRT			
Package: PRESS TUNNEL			
Title: TYPICAL MANHOLES DETAILS			
Consultant: <div> steer davis gleave  engicon</div>			
Design: S.H	Drawn by: CAD	Checked: H.A	
Scale: N.T.S	Date: DEC. 2016	Approved: W.Z.	
<div> METERS</div>			
Drawing Number: R-551			Rev.: 0



NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS
UNLESS OTHERWISE INDICATED.
2. REINFORCED CONCRETE ENCASEMENT TO BE
PROVIDED GENERALLY FOR PIPES WITH COVER
LESS THAN 1000 mm OR MORE THAN 4500 mm .
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100 mm FOR EACH CONNECTION INCREASE ABOVE
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AND LEVELS OF PIPELINE.
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BENCHING AREA (BELOW ACCESS OPENING).
(B) THE ORIENTATION OF THE ACCESS OPENING TO BEST
SUIT THE BENCHING.
(C) THE NUMBER OF CORRALLING (PRECAST RING)
COURSES AND THE COVER LEVEL.
(B) THE ORIENTATION AND EXACT LEVEL OF EACH
BRANCH, AND BACKDROP CONNECTION.

Purpose Of Issue	Rev.	Date	Approved

Client:



GREATER AMMAN MUNICIPALITY

Project:

STRUCTURAL DESIGN SERVICES FOR
AMMAN BRT

Package:

PRESS TUNNEL

Title:

MANHOLE COVERS AND TRENCHES DETAILS

Consultant:



Design: S.H	Drawn by: CAD	Checked: H.A
Scale: N.T.S	Date: DEC. 2016	Approved: W.Z.



Drawing Number:	Rev.:
R-552	0