BAB 1: REKABENTUK AWALAN_CREATE NETWORK

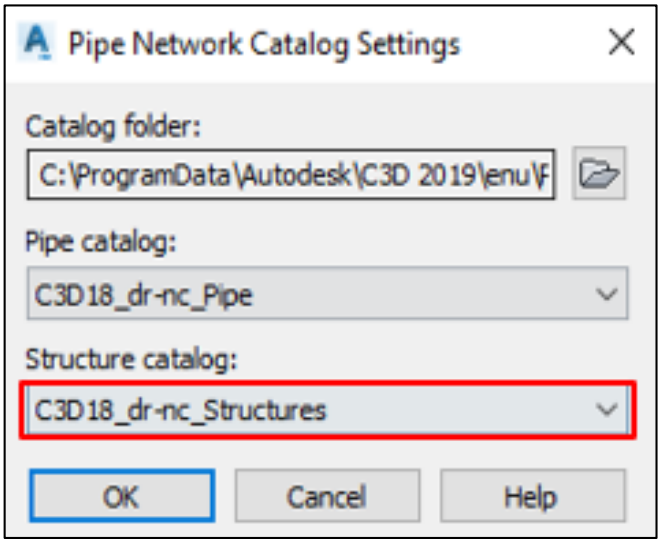
Create Network

Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

1. Folder latihan > 02_CourseWork > 01 Hospital Latihan_Rekabentuk Awalan_Create Network > 06_Resourses > 04 Family > Copy folder tersebut; i. **C3D18_dr-nc_Pipe** ii. **C3D18_dr-nc_Structures** 2. C > Program Data > Autodesk > C3D 2019 > enu > Pipes Catalog > paste fail. 3. 01 Hospital Latihan_Rekabentuk Awalan_Create Network > 01_WIP > C3D19_WIP_F0_00TP > copy > paste > rename > C3D19_WIP_F0_04DR 4. Aplikasi C3D > open file > C3D19_WIP_F0_04DR	5. Set working folder > 01 Hospital Latihan_Rekabentuk Awalan_Create Network. 6. Data shortcut > surface > 02EW_08_Rekabentuk Awalan > RC > create reference > Style > 02 Border only > ok 7. Taip Xref > attach > 01_WIP > C3D19_WIP_F0_03RD > open > check locate using geographic data Rajah 7a 8. Home tab > create design panel > set pipe network catalog Rajah 8a 9. Tutup fail

Rajah 7a



Rajah 8a

BAB 1: REKABENTUK AWALAN_CREATE NETWORK

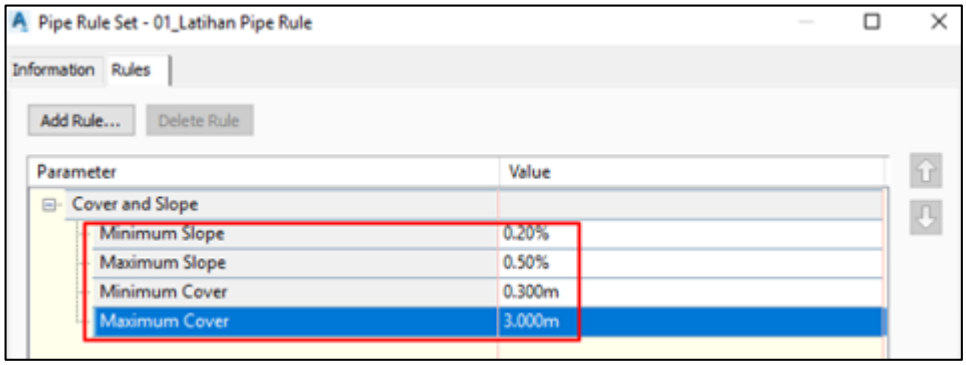
Create Network

Fail latihan: C3D19_WIP_F0_04DR.dwg.

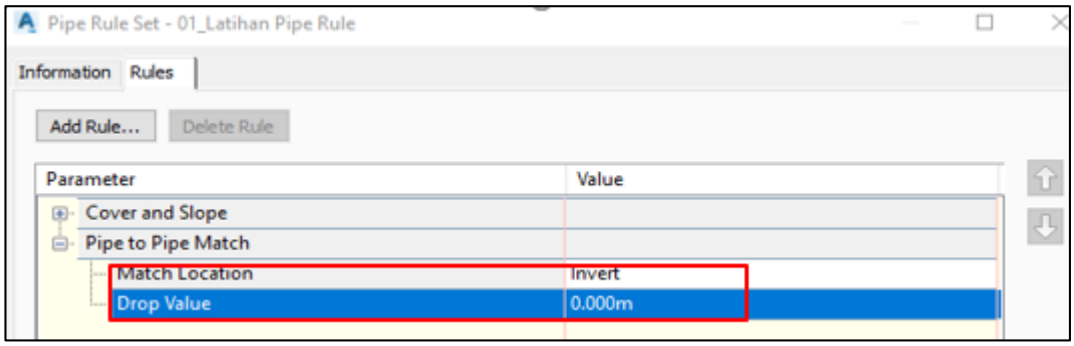
ARAHAN:

1. Setting tab > pipe > Pipe rule set > RC > new > isi maklumat seperti berikut;
   - **i. Information tab**
     Name: 01_Latihan Pipe Rule
   - **ii. Rules tab**
     - Add Rule > isi jadual seperti rajah di bawah;
       Rajah 1a
       Rajah 1b
       Rajah 1c
2. Setting tab > Structure > Structure rule set > rc > new > isi maklumat seperti berikut;
   - **i. Information tab**
     Name: 01_Latihan Structure Rule
   - **ii. Rules tab**
     - Add Rule > isi jadual seperti rajah di bawah;
       Rajah 2a
       Rajah 2b
       OK
3. Setting tab > pipe network > Part lists > RC > Create part list > isi maklumat seperti berikut;
   - **i. Information tab**
     Name: 01_ Monson Drain
   - **ii. Pipes tab**
     - New part list > RC > Add part family > General pipe > Tick General Rec. Pipe > OK
     - General Rec. Pipe > RC > add part size > isi maklumat seperti berikut;
       Inner pipe width: 600 mm
       Inner pipe height: 600 mm > ok
     - **Style:** Basic
     - **Rules:** 01_ Latihan pipe Rules
   - **iii. Structure tab**
     - New Part list > RC > Add part family > Rc Sump
     - Rc Sump > RC > add part size > isi maklumat seperti berikut;
       Drain Width: 600 mm > ok
     - **Style:** 02 Drainage reinforced Concrete Sump > ok
     - **Rules:** 01_Latihan Structure Rule > ok

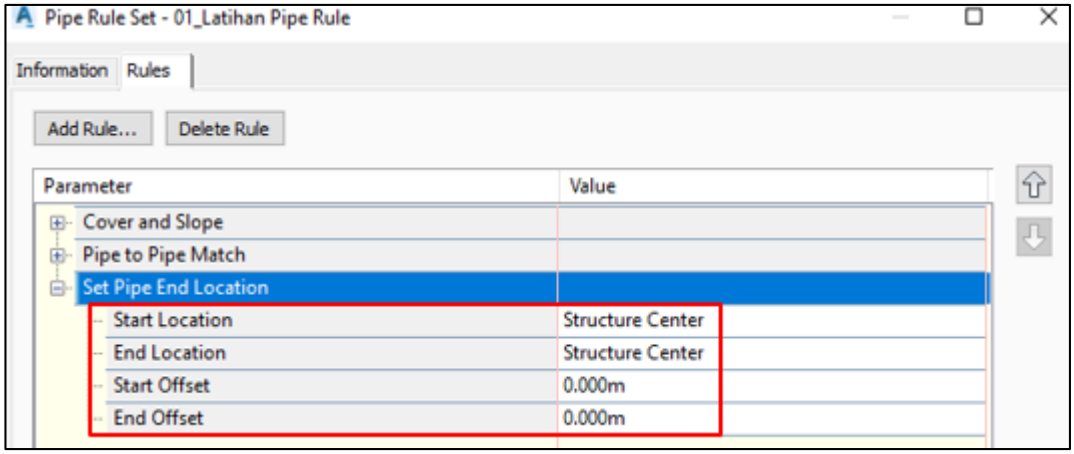
4. Home tab > create design panel > pipe network > pipe network creation tools > isi jadual seperti berikut;
    i. **Network Name:** 04DR_01_Monson Drain
    ii. **Network Part List:** 01_Monson Drain
    iii. **Surface Name**: 02EW_08_ Rekabentuk Awalan
    iv. **Structure label style**: 01 Drainage Sump
    v. **Pipe Label style:** 04 Flow Direction > ok
5. Network layout tools > Pipe network properties > Isi jadual mengikut maklumat tersebut;
    i. Layout setting
    Name templates:
    - Pipe: Rajah 8a
    - Structure: Rajah 8b > ok
6. Network layout tools > structure list > RC Sump 1300mm x 1300mm
7. Pipe List > 600mm x 600mm
8. La > enter > turn on layer 01_Mark Monson Drain
9. Turn off object snap
10. Network layout tools > draw pipe and structure > lukis pada point yg tlh ditanda > esc.
    Rajah 10a
11. Klik paip pada S7 – S9 > Rc > Pipe properties > Isi maklumat jadual seperti berikut;
    i. Start Invert Elevation:0
    ii. Pipe Slope (Hold Start): -0.2 > ok
12. Klik paip pada S7 – S8 > Rc > Pipe properties > Par properties > Isi maklumat jadual seperti berikut;
    i. Start Invert Elevation: 0.095 > apply
    ii. Pipe Slope (Hold Start): - 0.2 > apply > ok
13. Klik Pipe dan structure > RC > select similar > object viewer.
    Rajah 13a
14. Close Fail



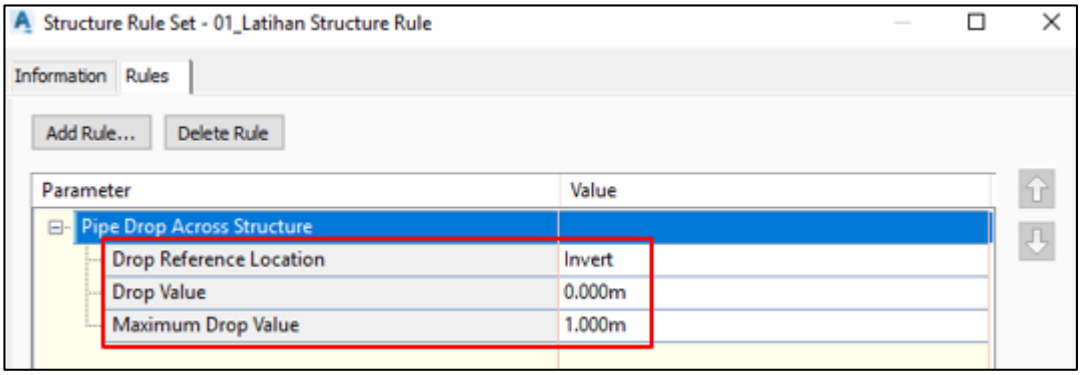
Rajah 1a



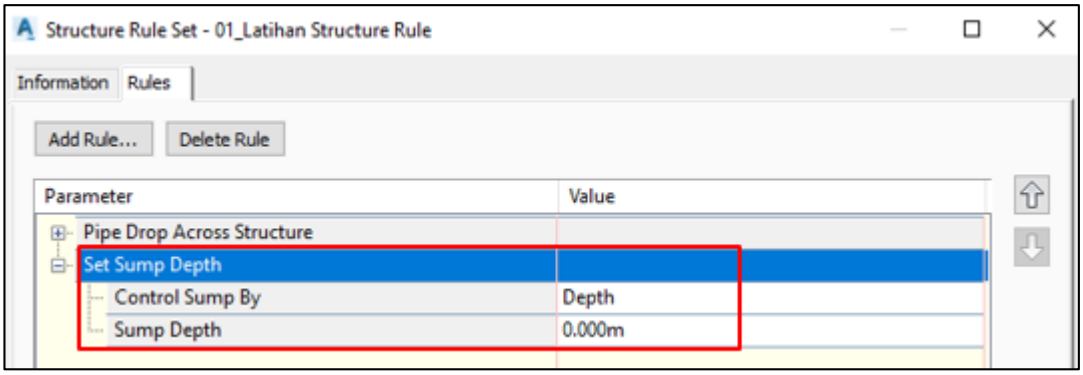
Rajah 1b



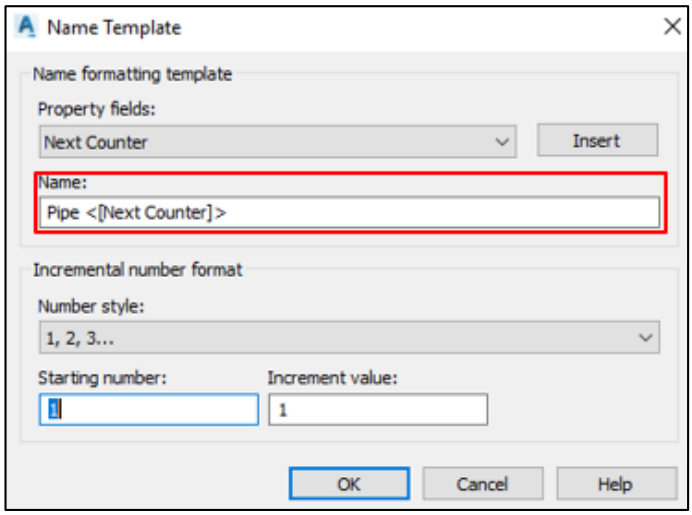
Rajah 1c



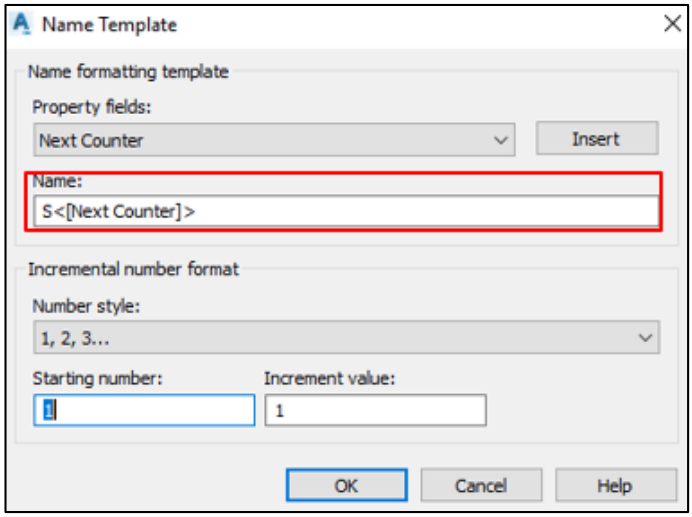
Rajah 2a



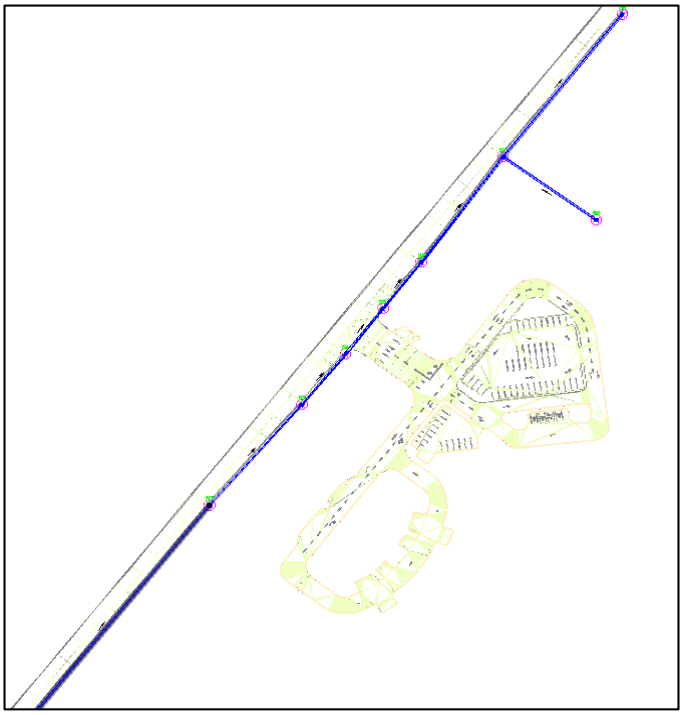
Rajah 2b



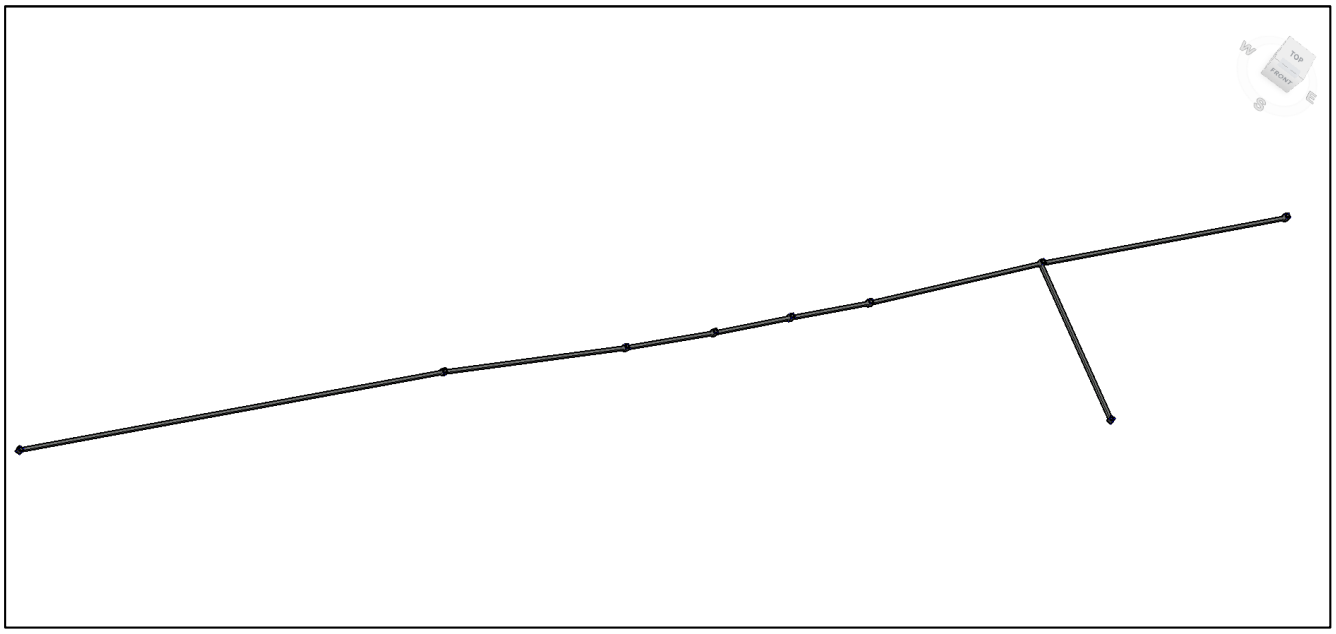
Rajah 8a



Rajah 8b



Rajah 10a



Rajah 13a

BAB 1: REKABENTUK AWALAN_CREATE NETWORK

Create Network

Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

1. Setting tab> pipe network > part list > RC > create part list > isi maklumat seperti berikut;
   - **i. Information Tab**
     - **Name:** 02_Internal Drain
   - **ii. Pipes Tab**
     - New part list > RC > Add part family > General pipe > general circular pipe > ok
     - General circular pipe
       1) Add Part Size > Inner Pipe Diameter > 300mm > ok
       2) **Style:** Basic > ok
       3) **Rules**: 01_Latihan Pipe Rules > ok

       Rajah 1a
   - **iii. Structure Tab**
     - New part list > RC > Add part family > typical sump > brick sump (type A)
     - Brick sump (type A)
       1) Add Part Size > Drain width > 300mm > ok
       2) **Style:** 01_Drainage brick sump > ok
       3) **Rules:** 01_Latihan Structure Rule > ok
     - Null Structure
       1) **Style:** Null style
       2) Rules: 01_Latihan Structure Rule > ok > ok

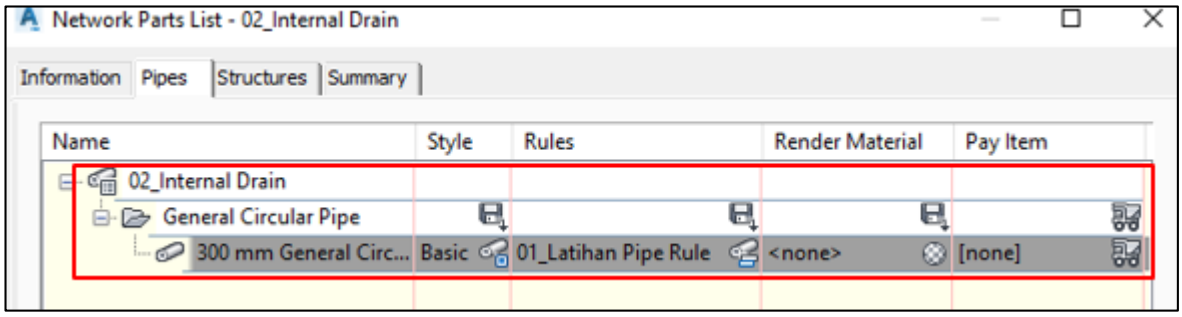
       Rajah 1b
2. La > enter > turn off > 01_ Monson Drain
3. Turn on layer > 02_ mark Internal Drain 1
4. Home tab > create design panel > Pipe network > pipe network creation tools > isi maklumat seperti berikut;
   - i. **Network Name**: 04DR_02_Internal Drain
   - ii. **Network part list:** 02_ Internal Drain
   - iii. **Surface name:** 02EW_08_Rekabentuk Awalan
   - iv. **Structure label style:** 01_ Drainage Sump
   - v. **Pipe Label style**: 04 Flow Direction > ok
5. Create pipe network seperti berikut;
   - i. **Structure list:** Brick sump (type A)
   - ii. Pipe List: 300mm General Circular Pipe
   - iii. **Draw pipes and structure:** Pipe and structure
   - iv. Pipe network properties

     Rajah 5a

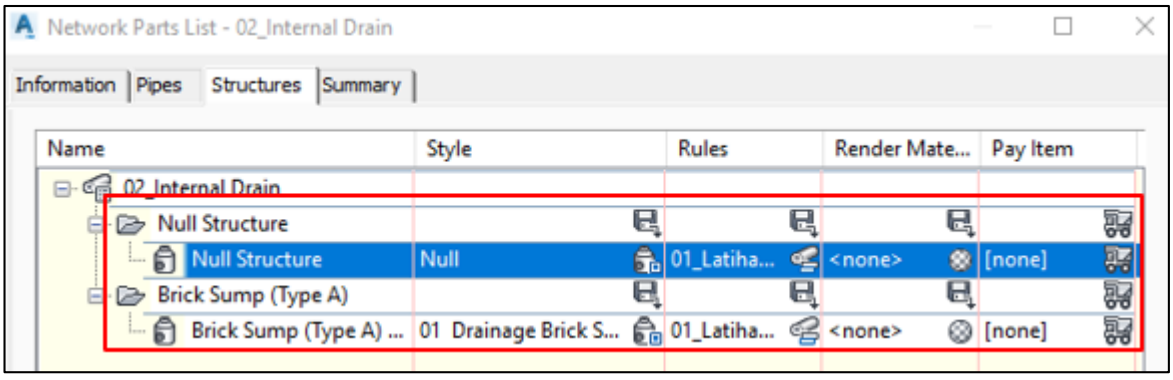
     Rajah 5b
   - v. Draw pipe and structure

     Rajah 5c

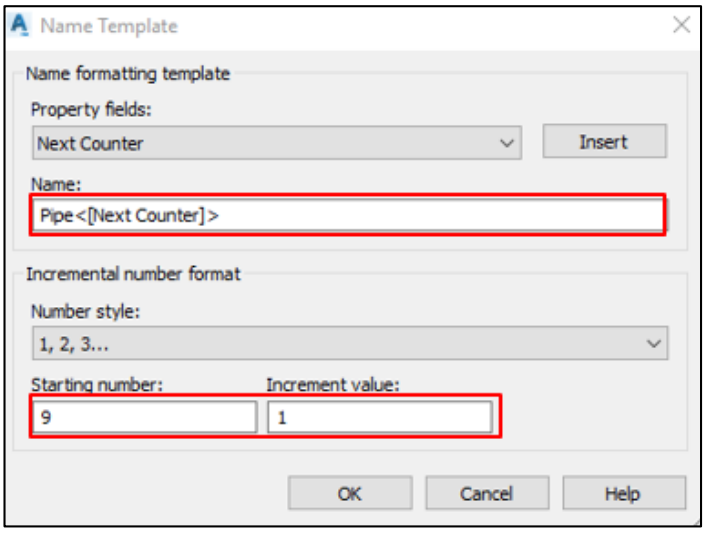
6. Klik S24> delete
7. Klik pipe S23 – S24 > RC > pipe properties > Tukar nilai seperti berikut;
    i. Start invert elevation: 1.893m > apply
    ii. Pipe Slope (Hold Start): -0.2 > apply > ok
    iii. Klik Pipe & structure S23 dan surface > object viewer
    Rajah 7a
8. La > enter > turn off > 02_ Mark Internal Drain 1
9. Turn on layer > 03_ Mark Internal Drain 2
10. Create pipe network untuk 03_ Mark Internal Drain 2
    Rajah 10a
11. Network layout Tools > Draw pipe and structure > pipe only > lukis pada S34 . RC > object viewer.
    Rajah 11a



Rajah 1a



Rajah 1b



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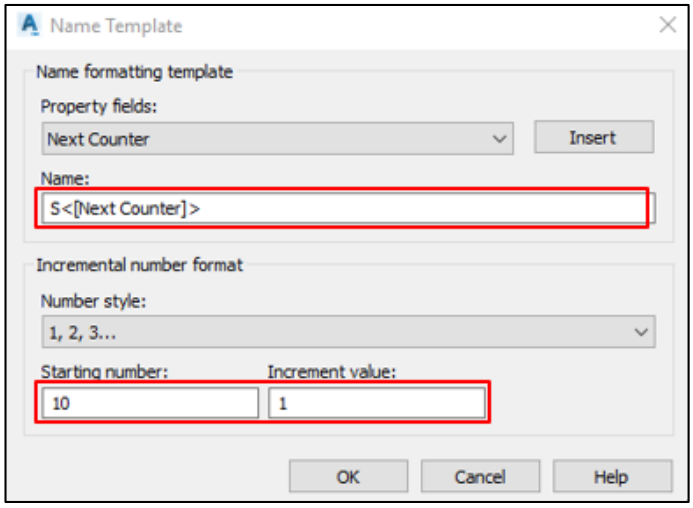
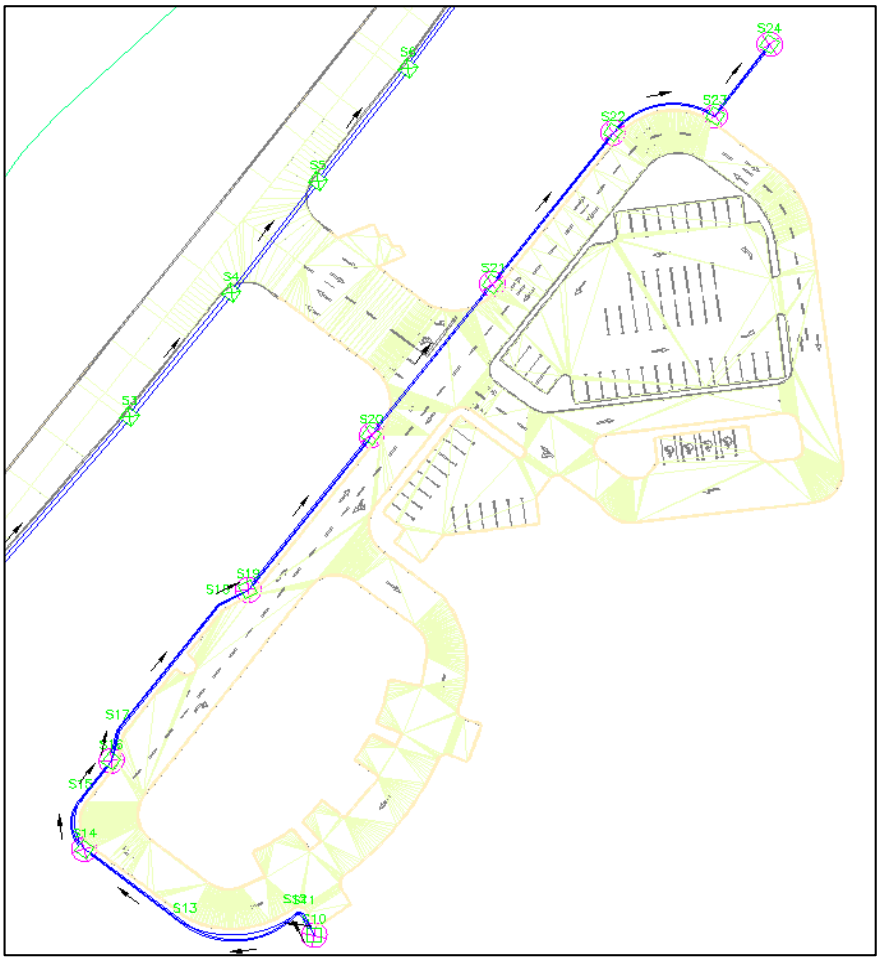
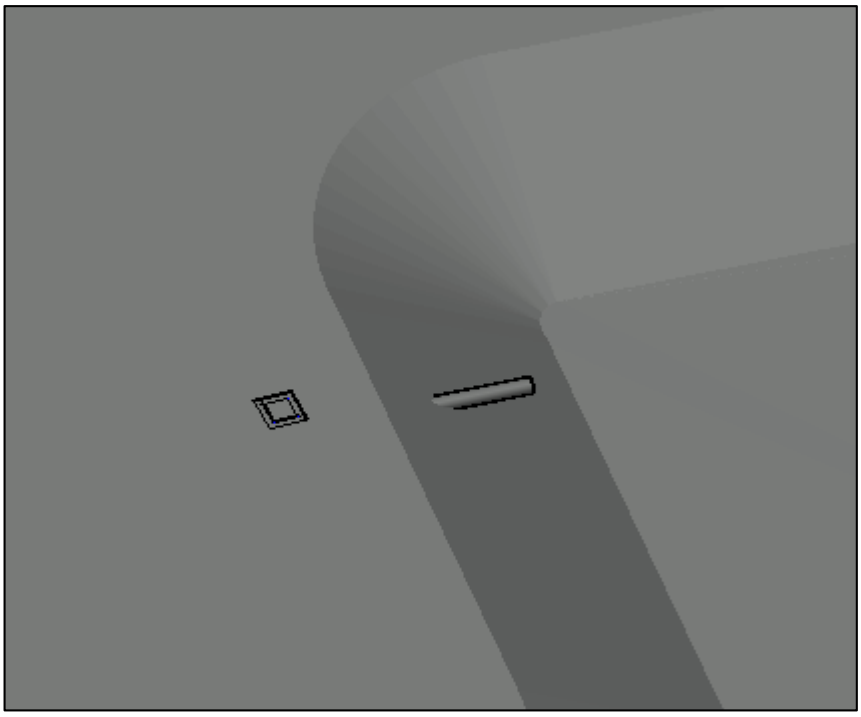


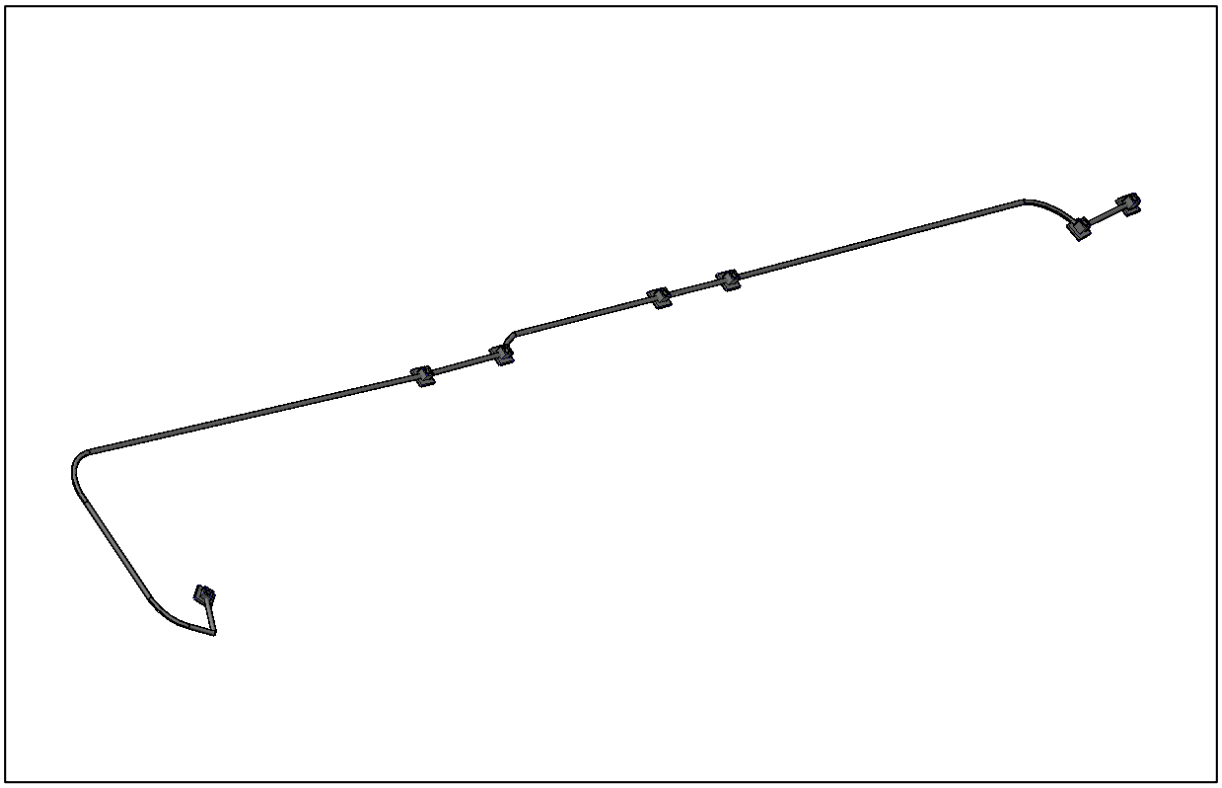
Rajah 5b



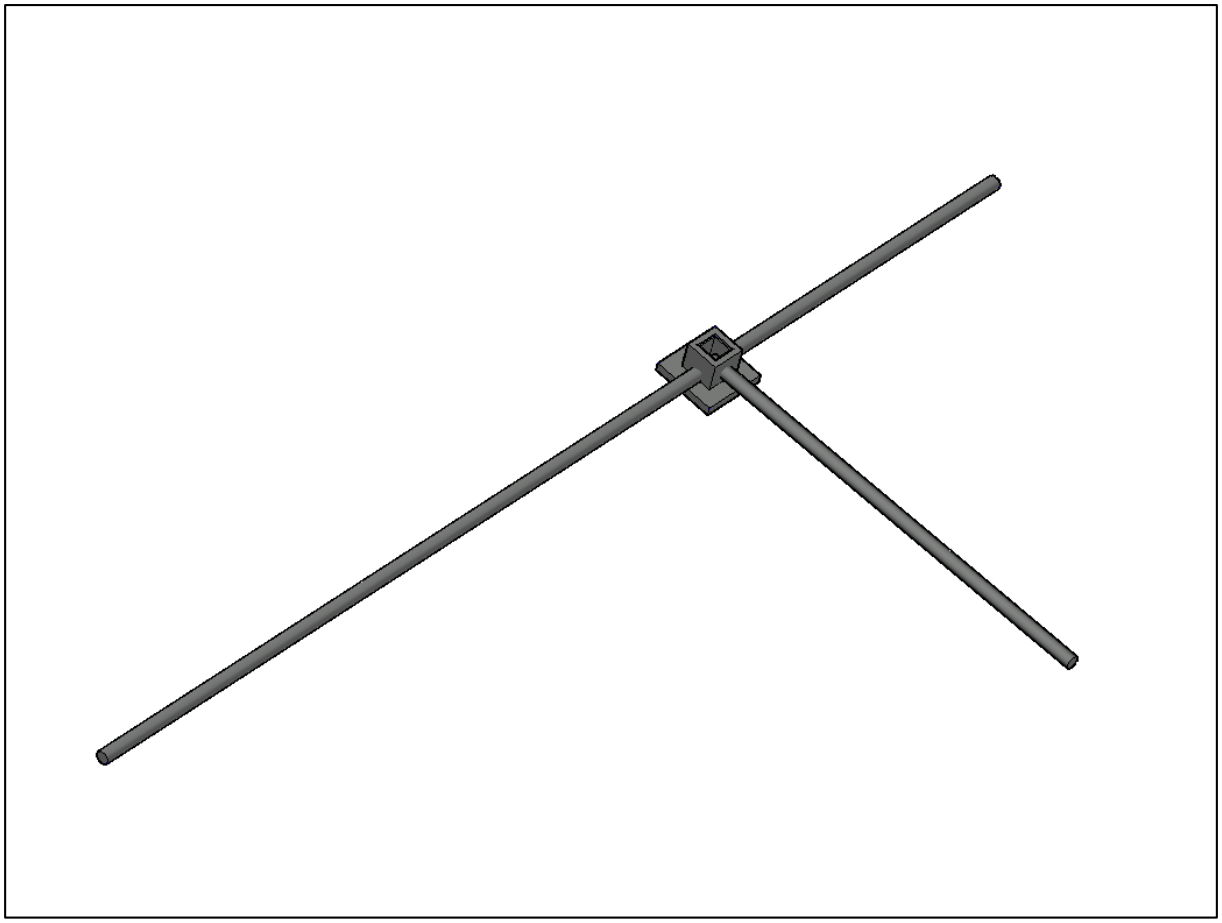
Rajah 5c



Rajah 7a



Rajah 10a



Rajah 11a

BAB 1: REKABENTUK AWALAN_CREATE NETWORK

Create Network

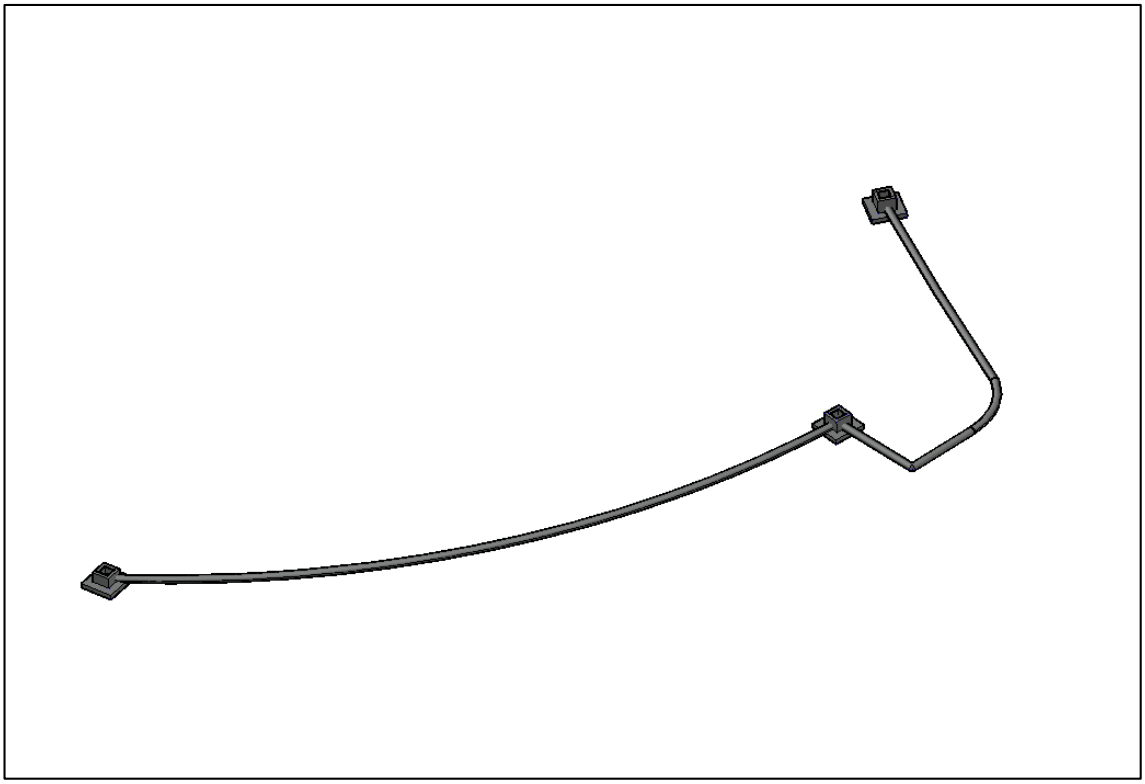
Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

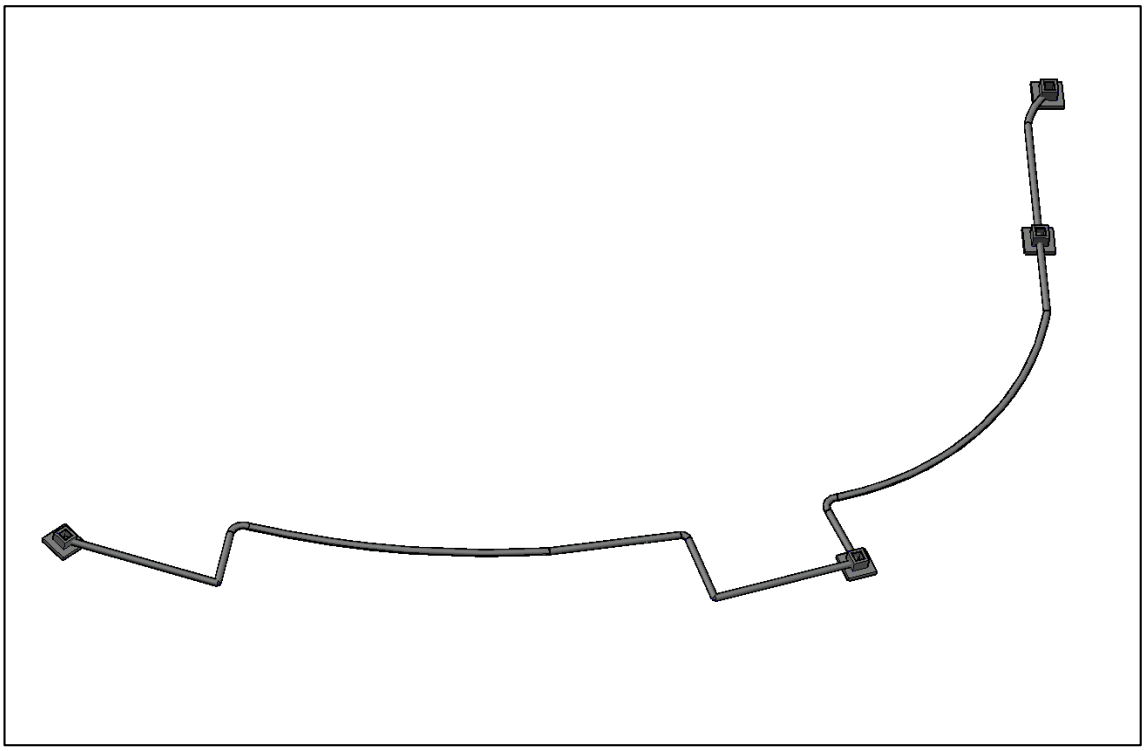
1. La > enter > turn off layer > 03_Mark Internal Drain 2
2. Turn on layer > 04_ Internal Drain 3
3. Prospector tab > pipe networks > networks > 04DR_02_Internal Drain > RC > Edit network > isi maklumat seperti berikut;
    i. **Structure list**: Brick sump/ Null Structure
    ii. **Pipe List:** 300mm General Circular Pipe
    iii. **Draw Pipe And Structures:** Pipes and structure
    iv. Create pipe network pada S25 sehingga S31 > Klik paip > object viewer
    Rajah 3a
4. La > enter > turn off layer > 04_ Mark Internal Drain 3
5. Turn on layer > 05_ Mark Internal Drain 4
6. Toolspace > pipe networks > networks > 04DR_02_Internal Drain > RC > Edit network > isi maklumat seperti berikut;
    i. **Structure list:** Brick sump/ Null Structure
    ii. **Pipe List:** 300mm General Circular Pipe
    iii. **Draw Pipe And Structures:** Pipes and structure
    iv. Create pipe network pada S10 sehingga S32 > Klik paip > object viewer
    Rajah 6a
7. Create pipe dari S56 ke S53
    Rajah 7a
8. La > enter > turn off layer > 05_ Mark Internal Drain 4
9. Turn on layer > 06 _ Mark Internal Drain 5
10. Create pipe dari S58 ke S35
    Rajah 10a

11. Create pipe dari S65 ke S37
    Rajah 11a
    Rajah 11b
12. La > enter > turn off layer > 06 _ Mark Internal Drain 5
13. Turn on layer > 07 _ Mark Internal Drain 6

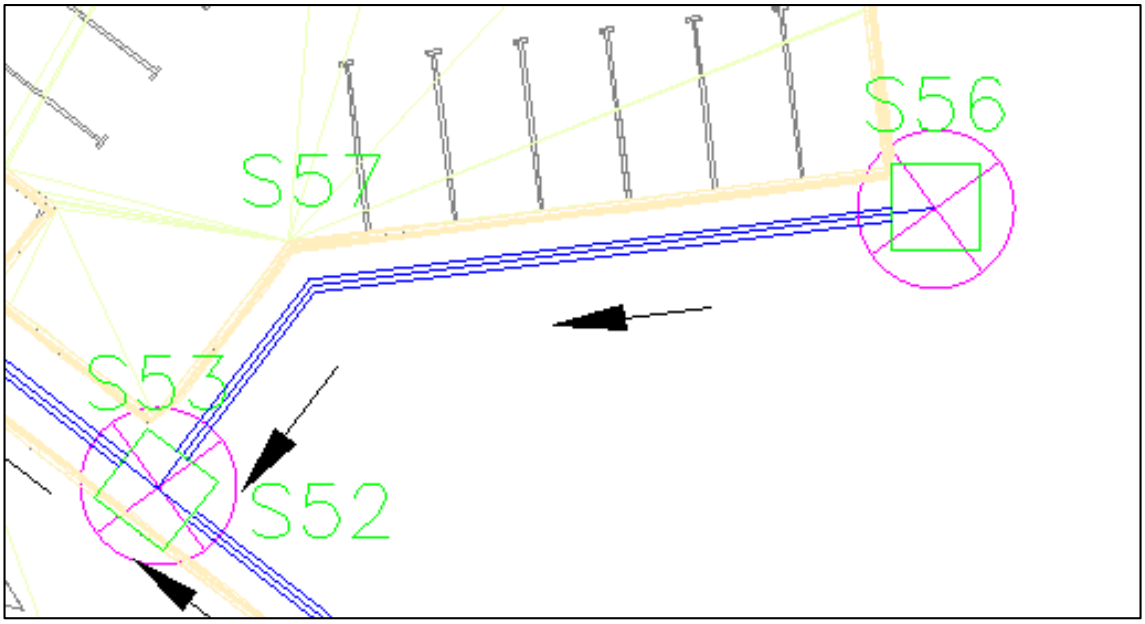
14. Create pipe dari S56 ke S23
    Rajah 14a
15. Turn off semua layer
16. Select pipe network > RC > Object viewer > tutup fail.
    Rajah 16a



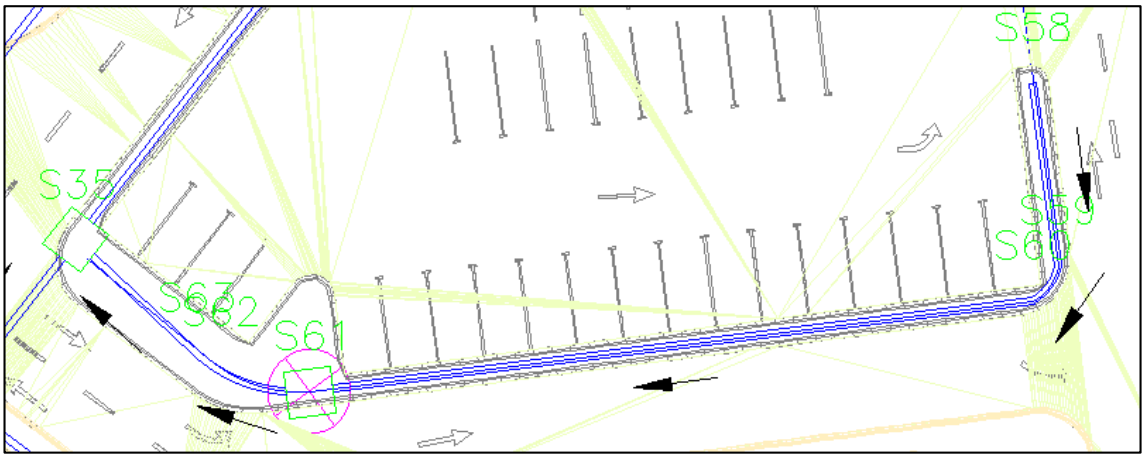
Rajah 3a



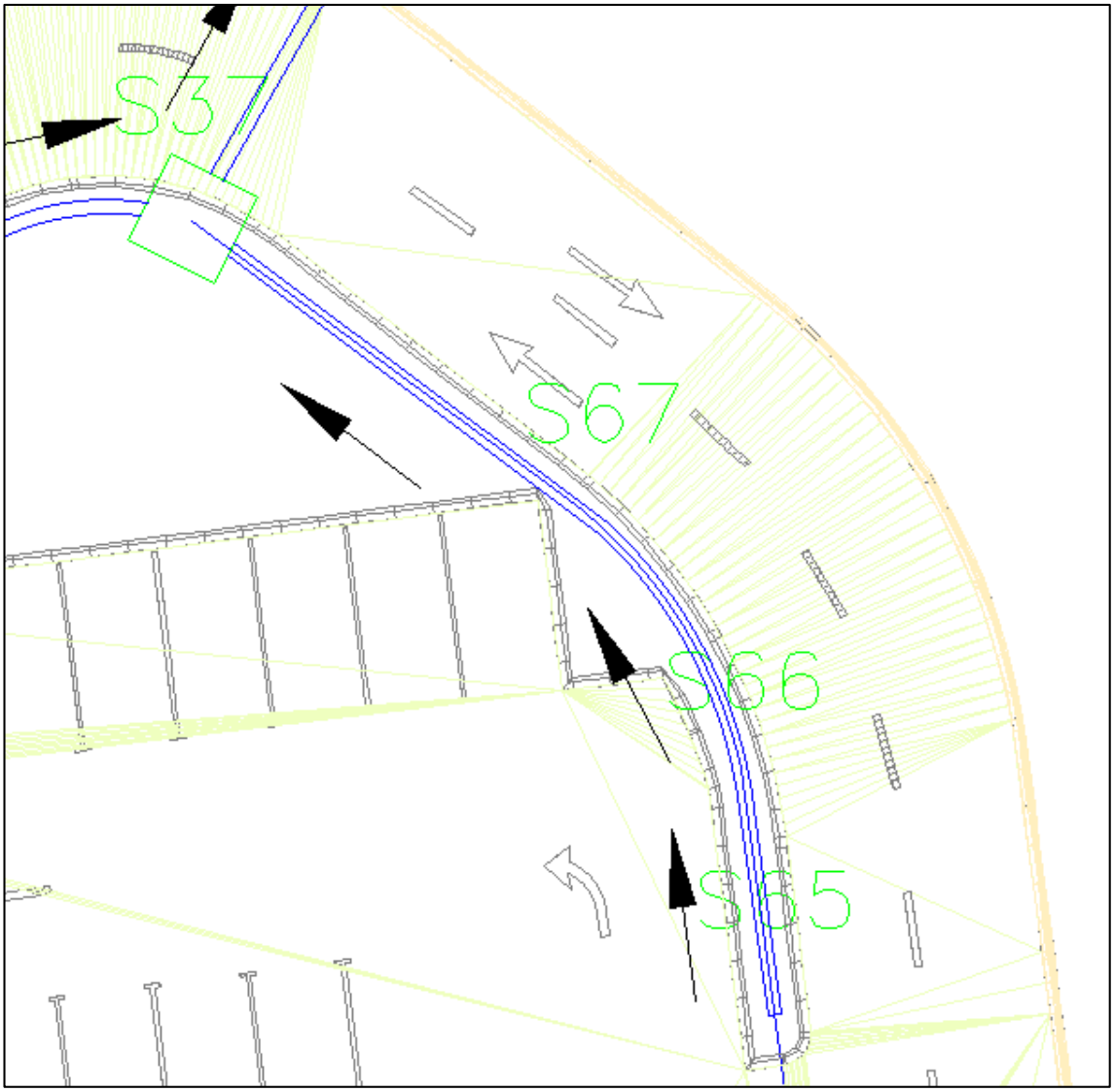
Rajah 6a



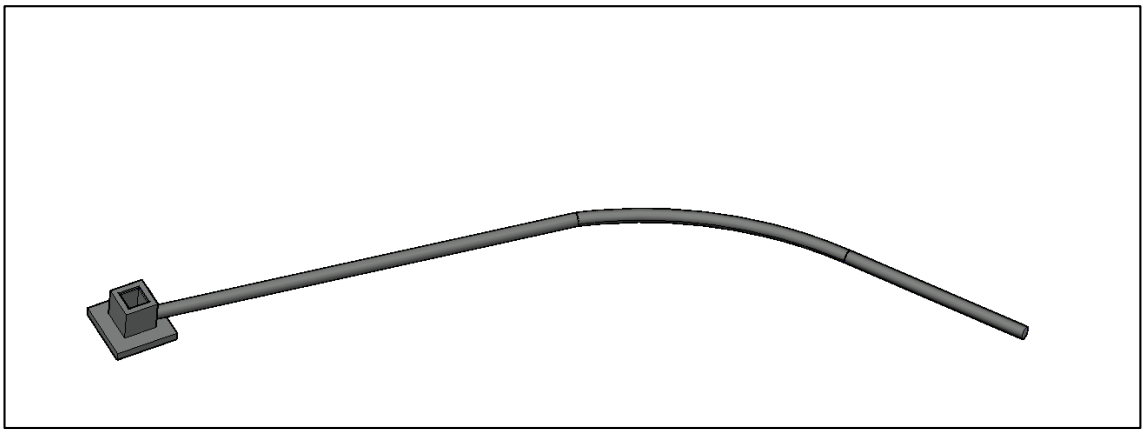
Rajah 7a



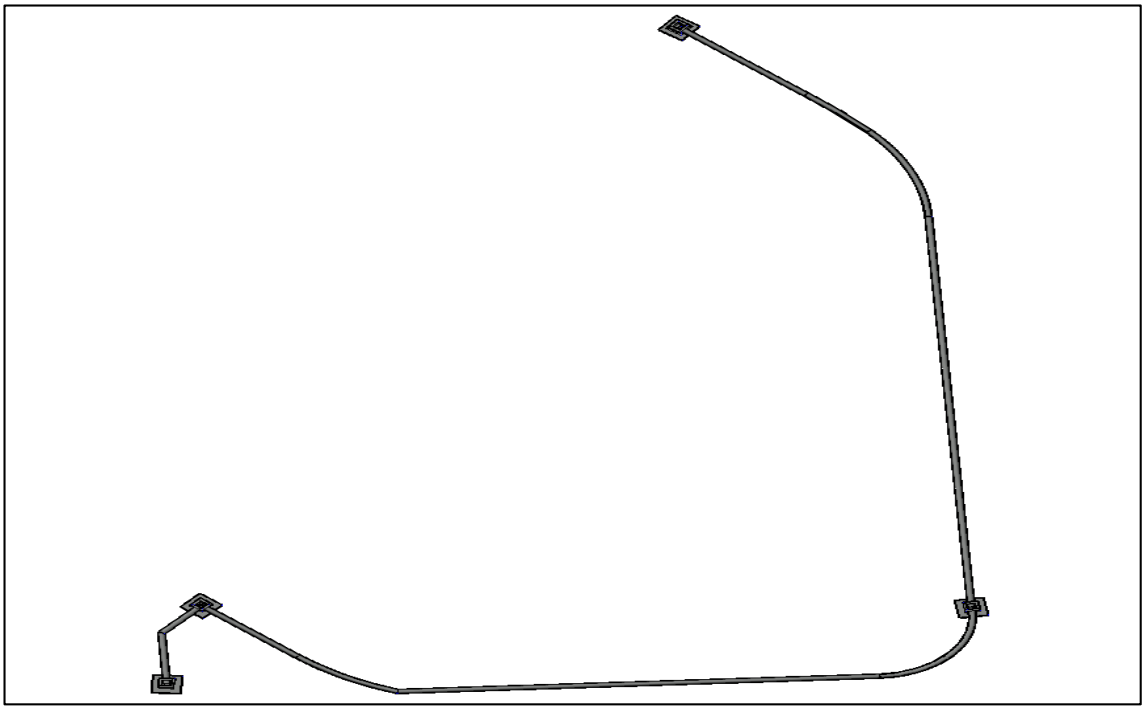
Rajah 10a



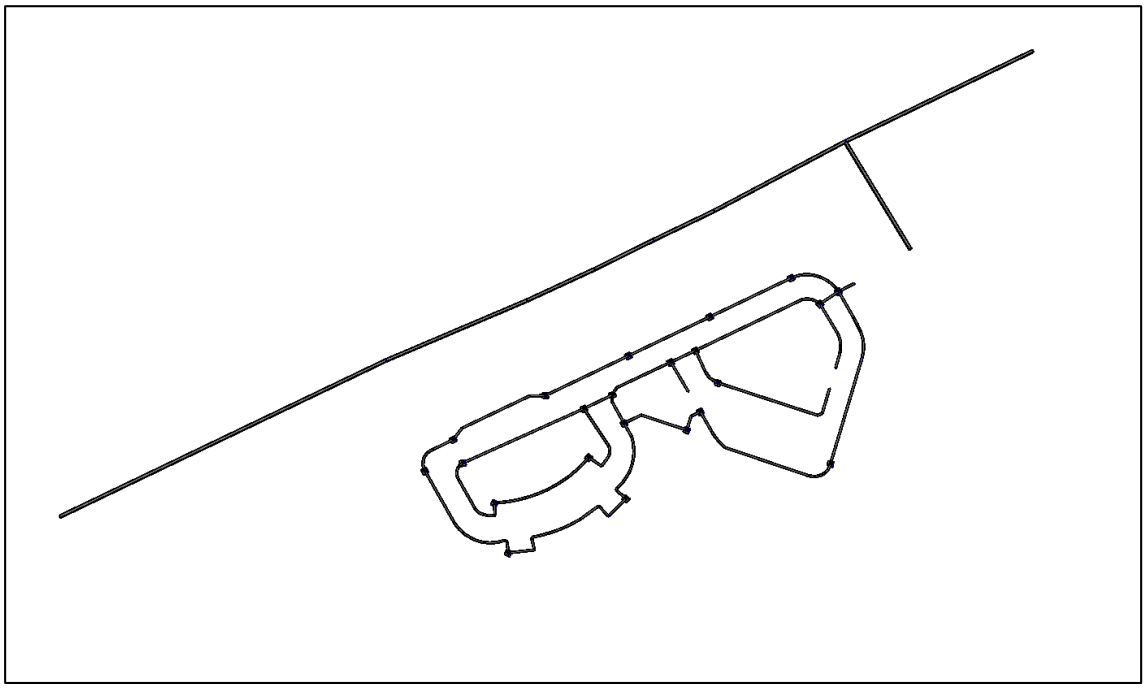
Rajah 11a



Rajah 11b



Rajah 14



Rajah 16a

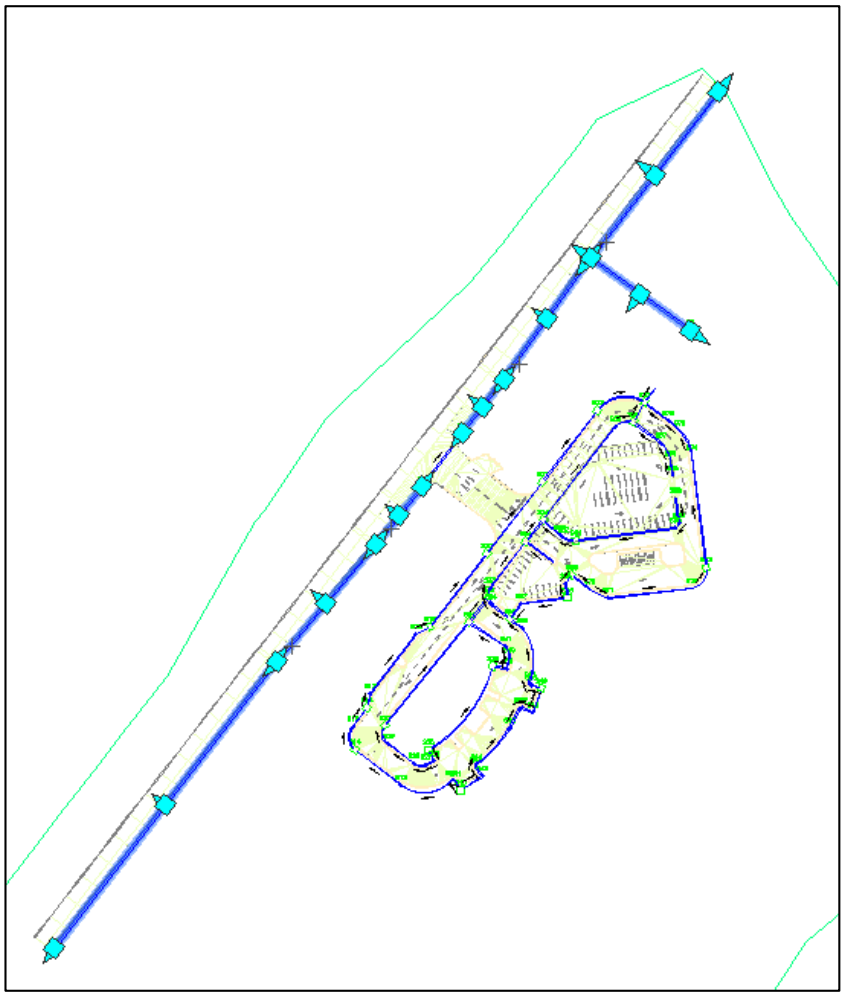
BAB 2 : REKABENTUK AWALAN_CREATE NETWORK

Create Network

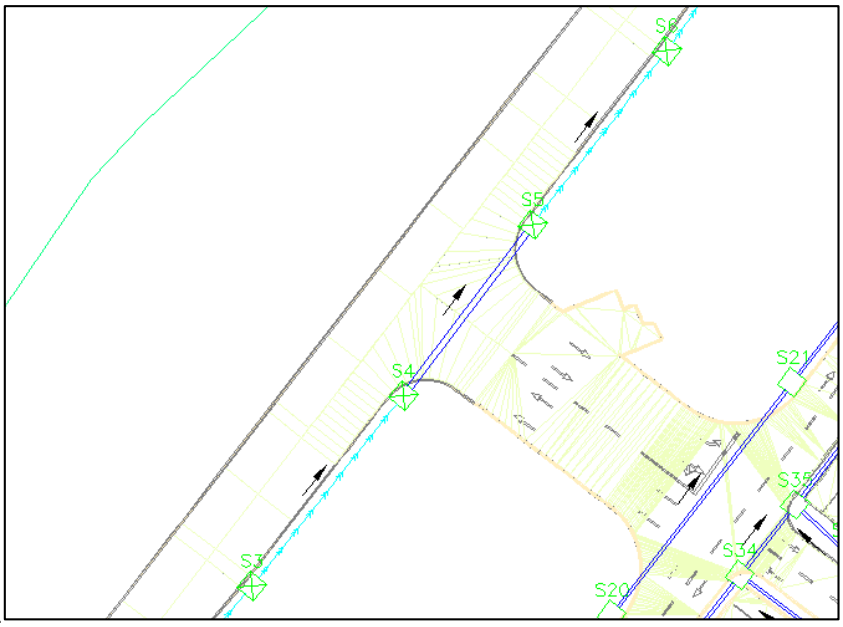
Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

1. Folder latihan > 02_CourseWork > 02 Hospital Latihan_Rekabentuk Awalan_Style Label dan Table > 01_WIP > C3D19_WIP_F0_04DR > open.
2. Prospector tab > Data shortcut > RC > Set working folder > 02 Hospital Latihan_Rekabentuk Awalan_Style Label dan Table.
3. Check direction sump
4. Pilih paip S1 – S8 (kecuali pipe S4-S5)
   Rajah 4a
5. RC > properties > style > 02 Precast Block Drain Size 2
   Rajah 5a
6. Klik paip S7-S9 >properties > style > 02 Precast Block Drain_Size 2- Reverse
7. Klik paip berikut dan tukarkan style kepada S4- S5 > properties > style > 11 Culvert
   i. S4 - S5
   ii. S20 - S21
   iii. S34 – S35
   iv. S37 – S23
8. Klik internal drain > Select similar > properties > style > 01 Precast Block Drain_ Size 1
   Rajah 8a
   Rajah 8b
9. Check direction untuk internal drain
10. Select direction > RC > Select similar > properties > pipe label style > 01 Drainage Pipe
    Rajah 11a

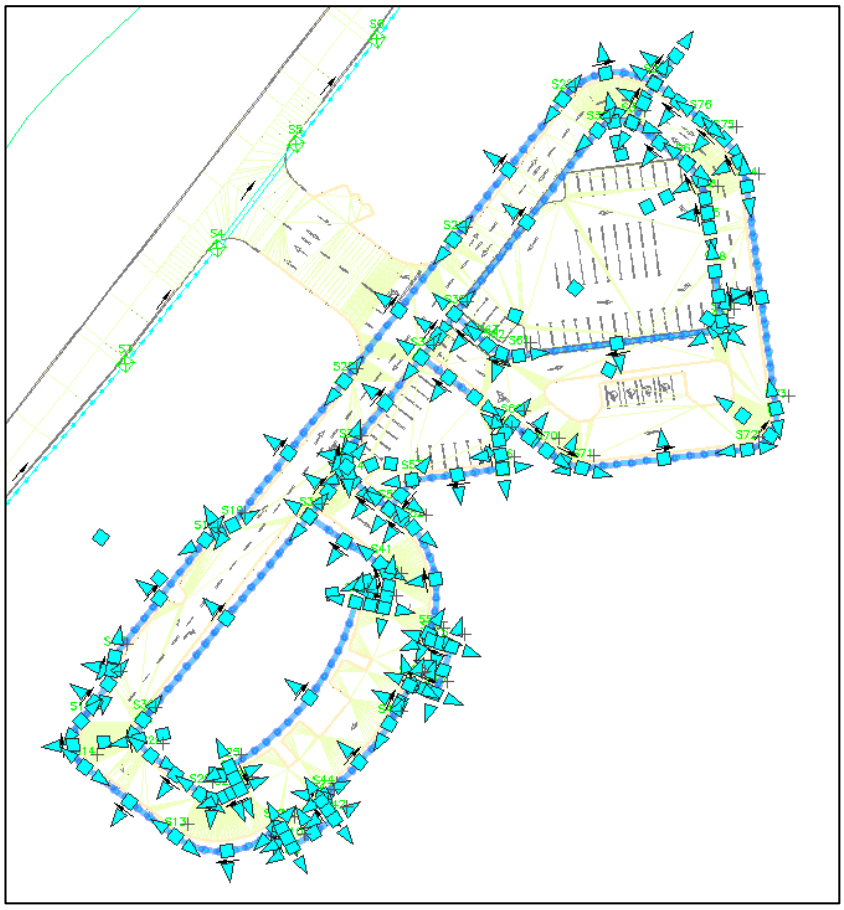


Rajah 4a

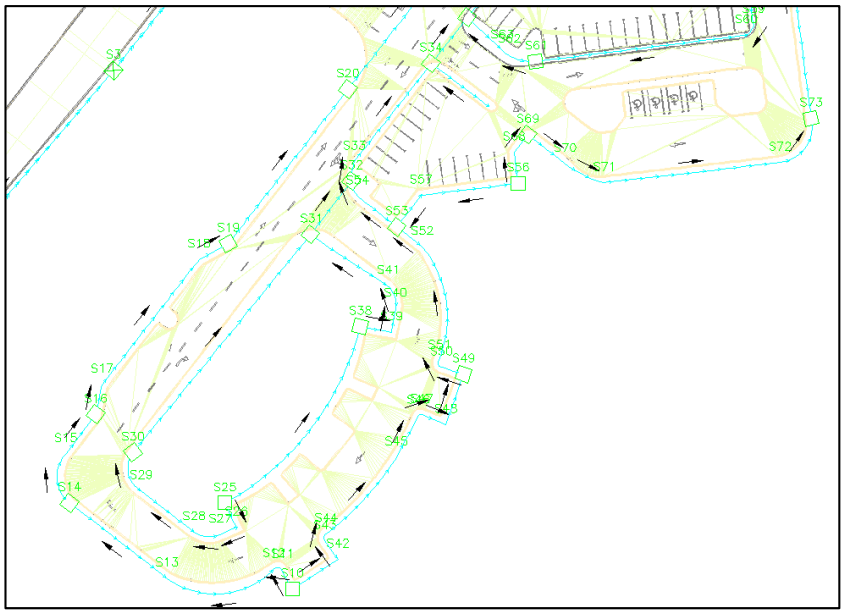


11

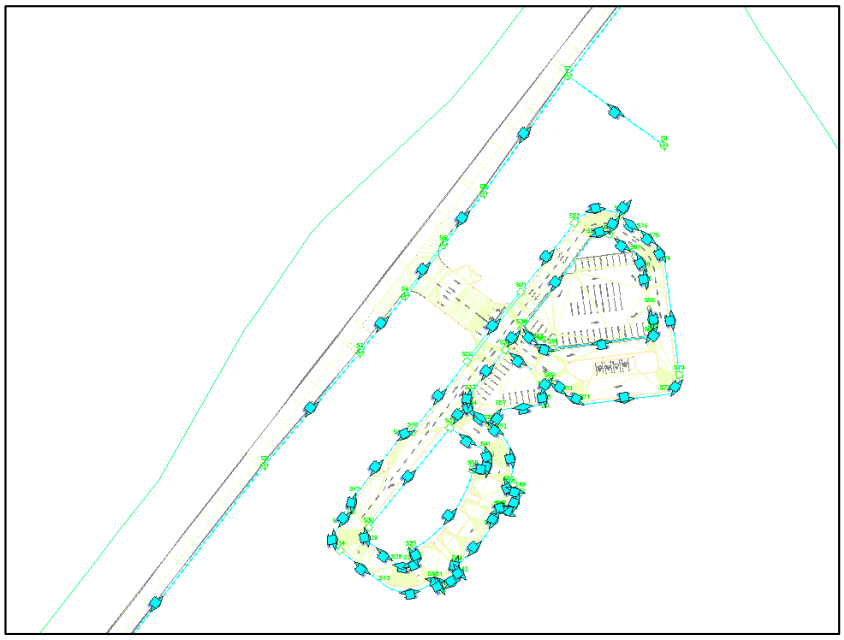
Rajah 5a



Rajah 8a



Rajah 8b



Rajah 11a

BAB 2 : REKABENTUK AWALAN_STYLE LABEL DAN TABLE

Add Label & Table

Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

1. Annotate tab > add label > pipe network > Single part plan > klik pada culvert tersebut;
   i. S4 – S5
   ii. S25 – S26
   iii. S22 – S23
   iv. S24 – S17
2. Prospector tab > pipe network > network > 04DR_01_Monson Drain > Pipes
3. Tukar nama Pipe 4 kepada C1
   Rajah 3a
4. Prospector tab > pipe network > network > 04DR_02_Internal Drain > Pipes > Tukarkan nama bagi paip tersebut;
   i. Pipe 19 > C2
   ii. Pipe 32 > C3
   iii. Pipe 35 > C4
5. Prospector tab > pipe network > network > 04DR_02_Internal Drain > Structures
6. Tukarkan nama untuk semua null structure bermula dari N1 – N43
7. Tukarkan nama untuk semua brick sump bermula dari S10 – S31
8. Tukarkan description untuk kesemua Brick Sump (Type A) Size 1000 mm x 1000 mm > Brick Sump
9. Prospector tab > pipe network > network > 04DR_01_ Monsun Drain > Structures
10. Tukarkan description untuk kesemua RC Sump Size 1300 mm x 1300 mm > RC Sump
11. Annotate tab > add table > pipe network > add structure > isi maklumat jadual seperti di bawah;
    i. **Table style:** 01 Sump Table
    ii. Check by network
    Select network: 04DR_01_ Monsun Drain
    iii. Check split table
    Max. rows per table: 10
    Max. table per stack: 3
    iv. Klik OK
    Rajah 11a
12. Annotate tab > add table > pipe network > add structure > isi maklumat jadual seperti di bawah;
    v. **Table style:** 01 Sump Table
    vi. Check by network
    Select network: 04DR_02_ Internal Drain
    vii. Check split table
    Max. rows per table: 42
    Max. table per stack: 3
    viii. Klik OK
    Rajah 12a
13. Delete kesemua null structure
14. Tutup fail

Status	Name	Descripti...
1	Pipe 1	600 mm X 6
1	Pipe 2	600 mm X 6
1	Pipe 3	600 mm X 6
1	C1	600 mm X 6

Rajah 3a

TABLE OF SUMP					
SUMP NO	DIMENSION (mm)	FINISH GROUND LEVEL (m)	SUMP INVERT LEVEL (m)	HEIGHT OF SUMP (m)	TYPE OF SUMP
S1	??? X ???	1.74	0.777	0.965	RC Sump
S2	??? X ???	1.73	0.498	1.231	RC Sump
S3	??? X ???	1.72	0.378	1.343	RC Sump
S4	??? X ???	1.81	0.320	1.588	RC Sump
S5	??? X ???	1.86	0.289	1.587	RC Sump
S6	??? X ???	1.71	0.216	1.498	RC Sump
S7	??? X ???	1.71	0.000	1.707	RC Sump
S8	??? X ???	1.70	−0.052	1.760	RC Sump
S9	??? X ???	1.08	0.095	0.985	RC Sump

Rajah 11a

TABLE OF SUMP					
SUMP NO	DIMENSION (mm)	FINISH GROUND LEVEL (m)	SUMP INVERT LEVEL (m)	HEIGHT OF SUMP (m)	TYPE OF SUMP
S10	??? X ???	3.00	2.365	0.635	Brick Sump (Type A)
S11	??? X ???	3.00	2.266	0.734	Brick Sump (Type A)
S12	??? X ???	3.00	2.227	0.773	Brick Sump (Type A)
S13	??? X ???	3.00	2.145	0.855	Brick Sump (Type A)
S14	??? X ???	3.00	2.074	0.926	Brick Sump (Type A)
S15	??? X ???	3.00	2.004	0.996	Brick Sump (Type A)
S16	??? X ???	3.00	1.933	1.067	Brick Sump (Type A)
S17	??? X ???	3.00	1.893	1.107	Brick Sump (Type A)
S18	??? X ???	3.00	2.365	0.635	Brick Sump (Type A)
S19	??? X ???	3.00	2.293	0.707	Brick Sump (Type A)
S20	??? X ???	3.00	2.195	0.805	Brick Sump (Type A)
S21	??? X ???	3.00	2.170	0.830	Brick Sump (Type A)
S22	??? X ???	3.00	2.117	0.883	Brick Sump (Type A)
S23	??? X ???	3.00	2.096	0.904	Brick Sump (Type A)
S24	??? X ???	3.00	1.989	1.011	Brick Sump (Type A)
S25	??? X ???	3.00	2.281	0.719	Brick Sump (Type A)
S26	??? X ???	3.00	2.247	0.753	Brick Sump (Type A)
S27	??? X ???	3.00	2.179	0.821	Brick Sump (Type A)
S28	??? X ???	3.00	2.365	0.635	Brick Sump (Type A)
S29	??? X ???	3.00	2.262	0.738	Brick Sump (Type A)
S30	??? X ???	3.00	2.345	0.655	Brick Sump (Type A)
S31	??? X ???	3.00	2.225	0.775	Brick Sump (Type A)

Rajah 12a

BAB 3 : REKABENTUK TERPERINCI_SALIRAN TERBUKA

Create Profile View and profile

Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

1. Folder latihan > 03 Hospital Latihan_Rekabentuk Terperinci_Saliran Terbuka > 01_WIP > C3D19_WIP_F0_04DR > open
2. Prospector tab > Data shortcut > RC > Set working folder > 03 Hospital Latihan_Rekabentuk Terperinci_Saliran Terbuka
3. Home tab > create design panel > alignment > create alignment from network parts > klik S1 & Klik S8 > enter.
   Rajah 3a
4. Isi dialog box create alignment- from pipe network seperti berikut;
   i. **Name**: 04DR_MS_01_Monson Drain
   ii. **Type:** Miscellaneous
   iii. **Alignment style**: 04 Miscellaneous Alignment
   iv. **Alignment label set**: 01 No label set
   v. **Create profile and profile view:** check > ok
5. Create profile from surface
   Rajah 5a
6. Create Profile View
   i. General tab
   - Profile view style: 03 Drainage profile view > next

   ii. Station range
   - Use default > next

   iii. Profile View height
   - Use default > next

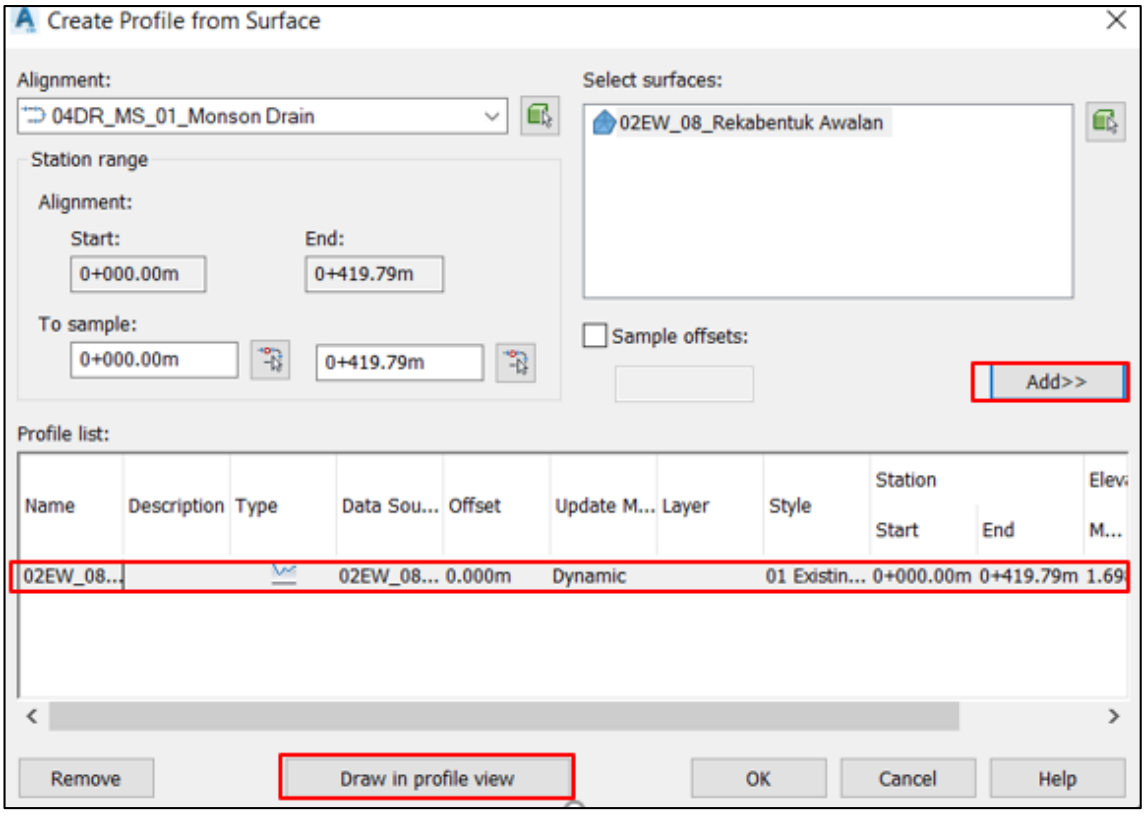
   iv. Profile display options
   - Use default > next

   v. Pipe/ Pressure network
   - Choose all 04DR_01_Monson Drain > next

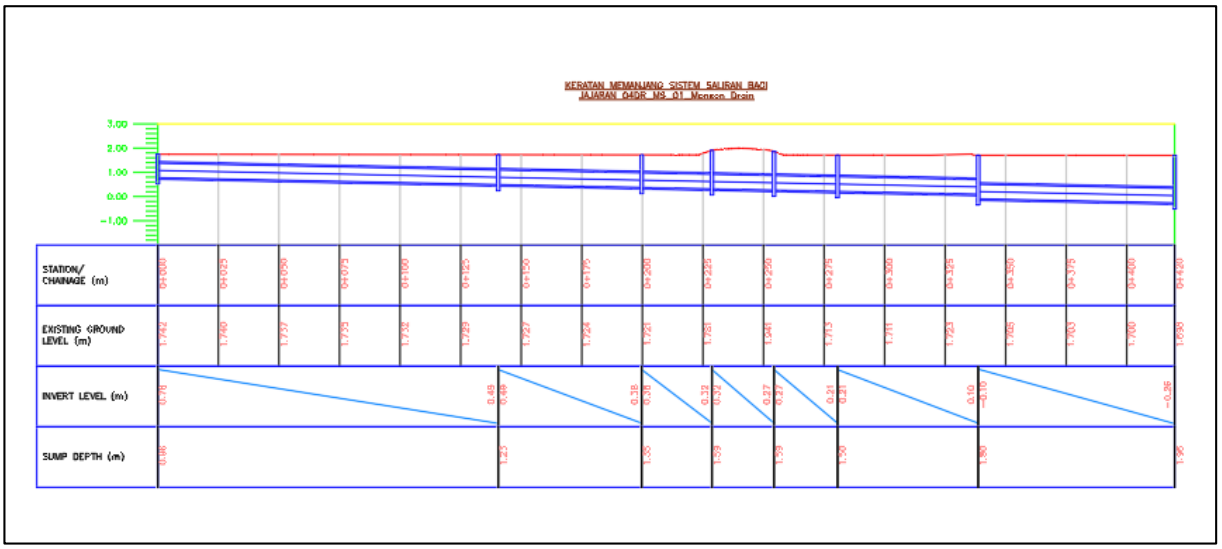
   vi. Data bands
   - Select band set: 03 Drainage band set > next

   vii. Profile hatch options
   - Use default > Create profile view
     Rajah 6a
7. Home tab > create design panel > profile > profile ceation tools > klik tajuk profile view
8. Isi maklumat create profile seperti di bawah;
   i. **Name:** Invert level
   ii. **Profile style:** 02 Design Profile
   iii. **Profile label set:** none
   iv. Klik OK
9. Draw tangent > klik pada paip
   Rajah 9a
   Rajah 9b
   Rajah 9c

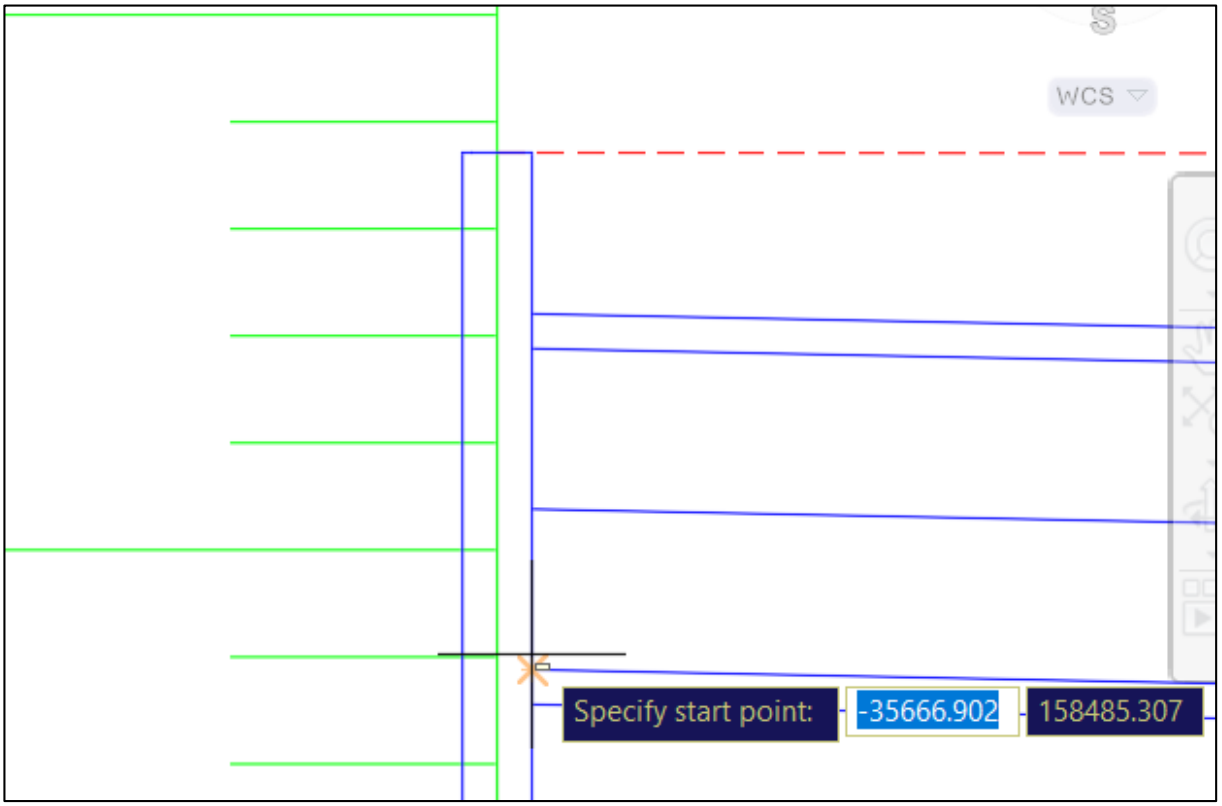
Rajah 3a



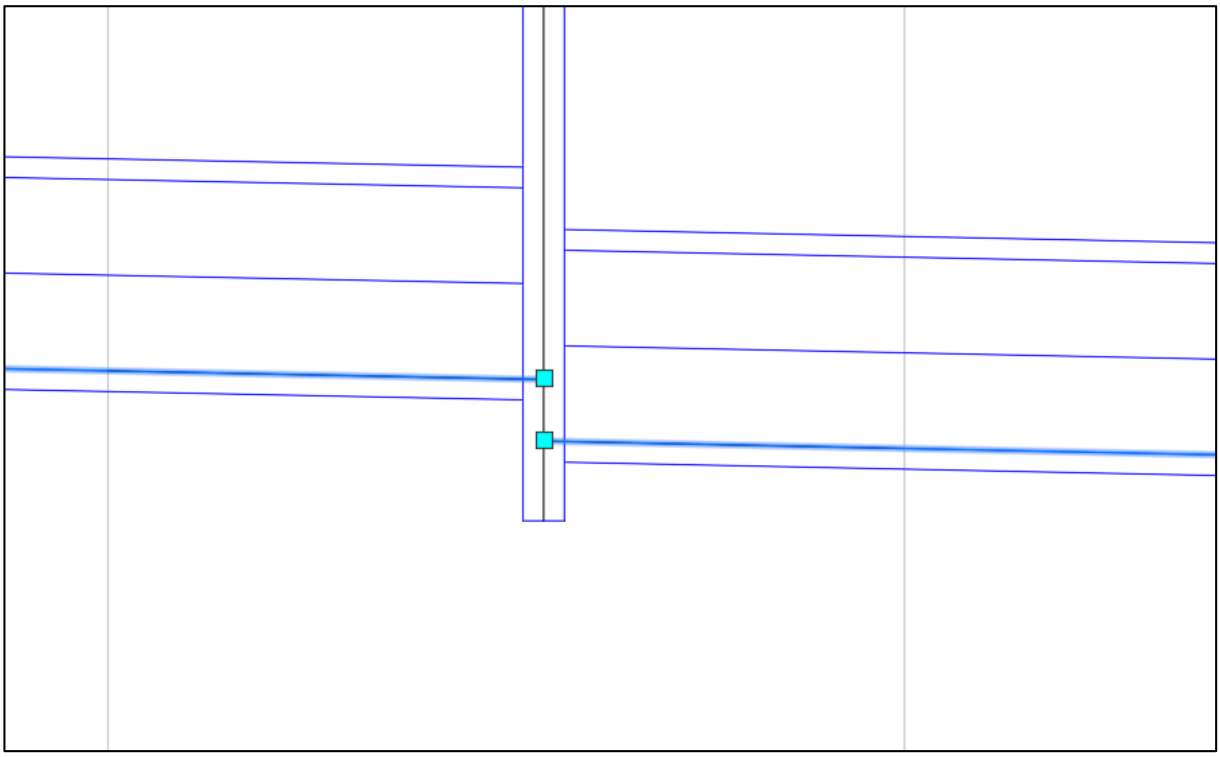
Rajah 5a



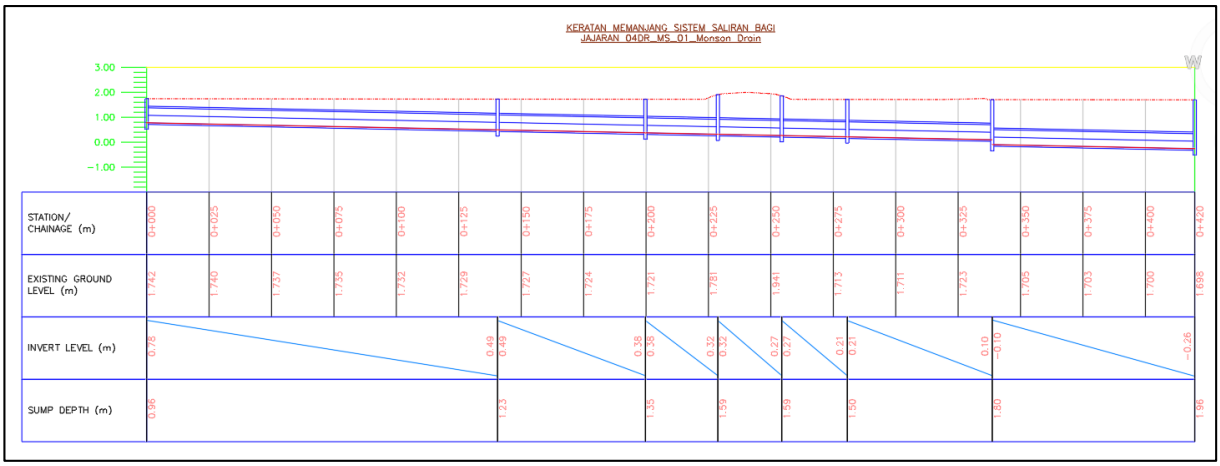
Rajah 6a



Rajah 9a



Rajah 9b



Rajah 9c

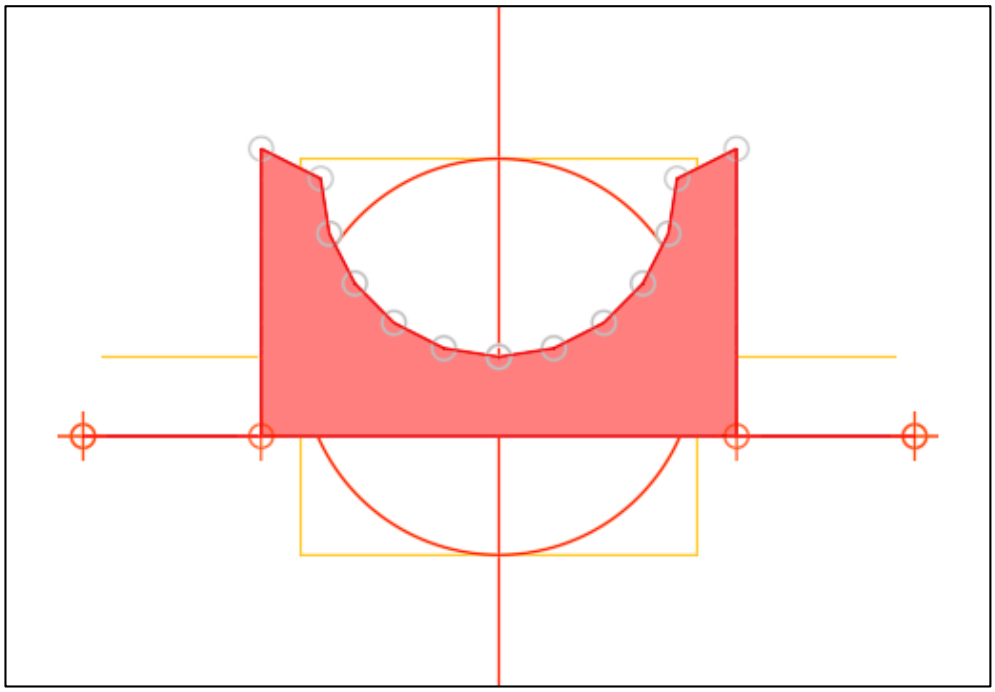
BAB 3 : REKABENTUK TERPERINCI_SALIRAN TERBUKA

Create Drain

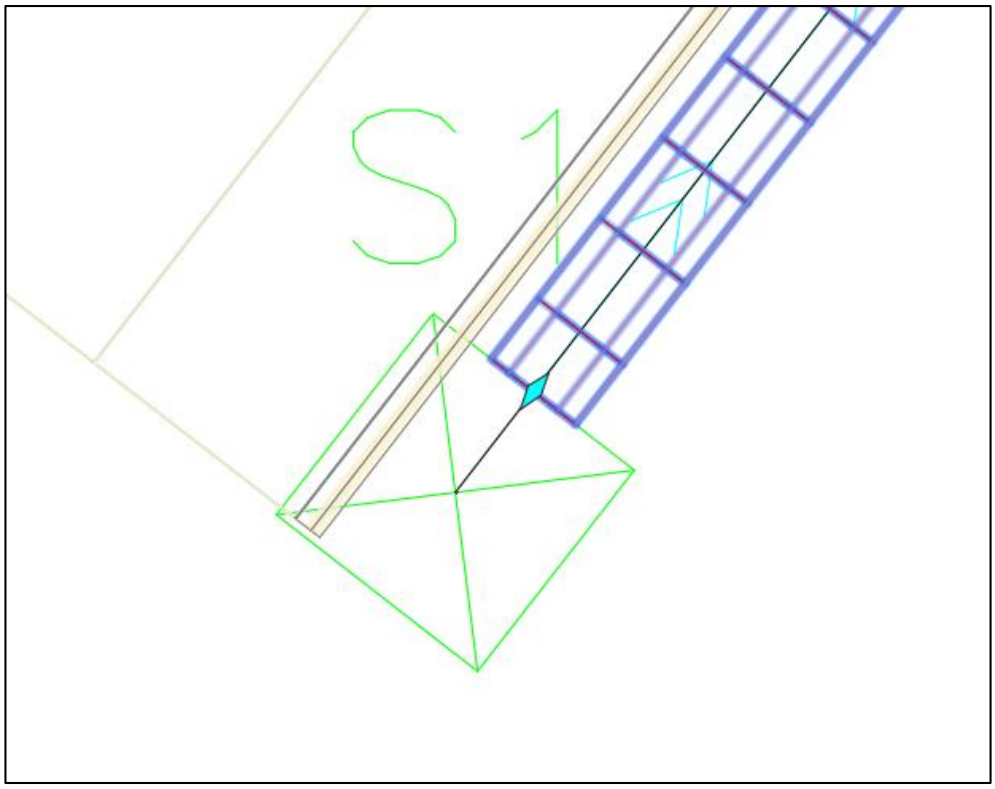
Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

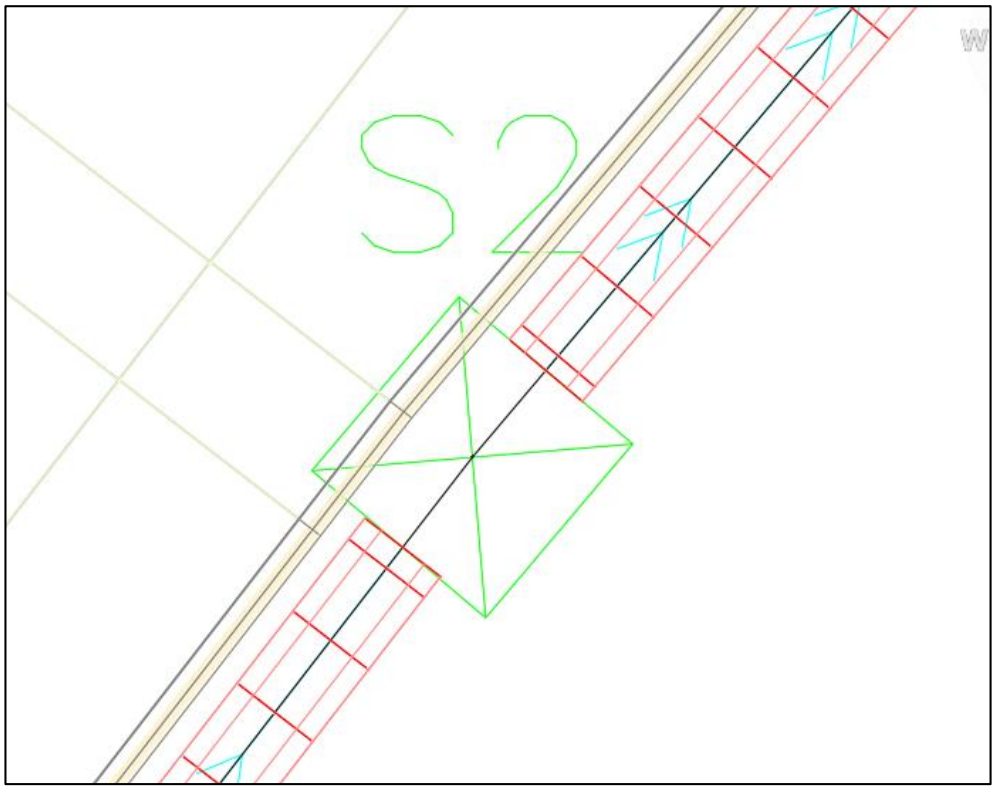
1. Tool pallete > RC > new pallete > Latihan > RC Latihan > Import subassemblies > source file > 03 Hospital Latihan_Rekabentuk Terperinci_Saliran Terbuka > 06_Resourses > 04 Family > C3D18_dr-sa_Half Round > open > ok.
2. Home tab > create design panel > Assembly > create assembly > isi maklumat seperti berikut;
    i. **Name:** 04DR_01_Monson Drain_Half Round
    ii. **Assembly Type**: Other
    iii. **Assembly Style**: Basic
    iv. **Code Set Style:** 02 JKR All Codes > OK
3. Select Half_Round_Drain > Klik pada assembly > esc
4. Home tab > corridor > corridor > Isi maklumat seperti berikut;
    i. **Name:** 04DR_01_Monson Drain
    ii. **Corridor style:** 01 JKR General Corridor
    iii. **Baseline type**: Alignment and profile
    iv. **Alignment:** 04DR_MS_01_Monson Drain
    v. **Profile:** Invert Level
    vi. **Assembly:** 04DR_01_Monson Drain_Half Round
    vii. **Target surface:** 02EW_08_Rekabentuk Awalan
    viii. **Set baseline and region parameters**: Check > ok > Rebuild corridor.
5. Klik corridor > object viewer.
6. Klik corridor > Rc > corridor properties > isi maklumat seperti berikut;
    i. Parameters tab
    Frequency
    - Along tangent: 1.000m
    - Curve increment: 1.000m
    - Along spiral: 1.000m
    - Along vertical curves: 1.000m
7. Klik S1 sehingga S9 > RC > properties > style > basic > esc
8. Klik S1 > adjust corridor
    Rajah 8a
9. Klik corridor > split region > adjust corridor untuk S2, S3,S4,S5,S6,S7,S8
    Rajah 9a



Rajah 3a



Rajah 8a



Rajah 9a

BAB 3 : REKABENTUK TERPERINCI_SALIRAN TERBUKA

Create Corridor

Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

1. Home tab > create design panel > alignment > create alignment from network parts > klik S9 dan S7 > enter.
2. Isi maklumat create alignment – from pipe network dialog box seperti di bawah;
   i. **Name:** 04DR_MS_02_Monson Drain
   ii. **Type:** Miscellaneous
   iii. **Alignment style**: 04 Miscellaneous Alignment
   iv. **Alignment label set**: 01 No Labels Set
   v. **Create profile and profile view:** Check > ok
3. Create profile from surface
4. Create profile view dialog box
   i. General tab
   - Profile view style: 03 Drainage profile view > next

   ii. Station range
   - Use default > next

   iii. Profile View heig**ht**
   - Use default > next

   iv. Profile display options
   - Use default > next

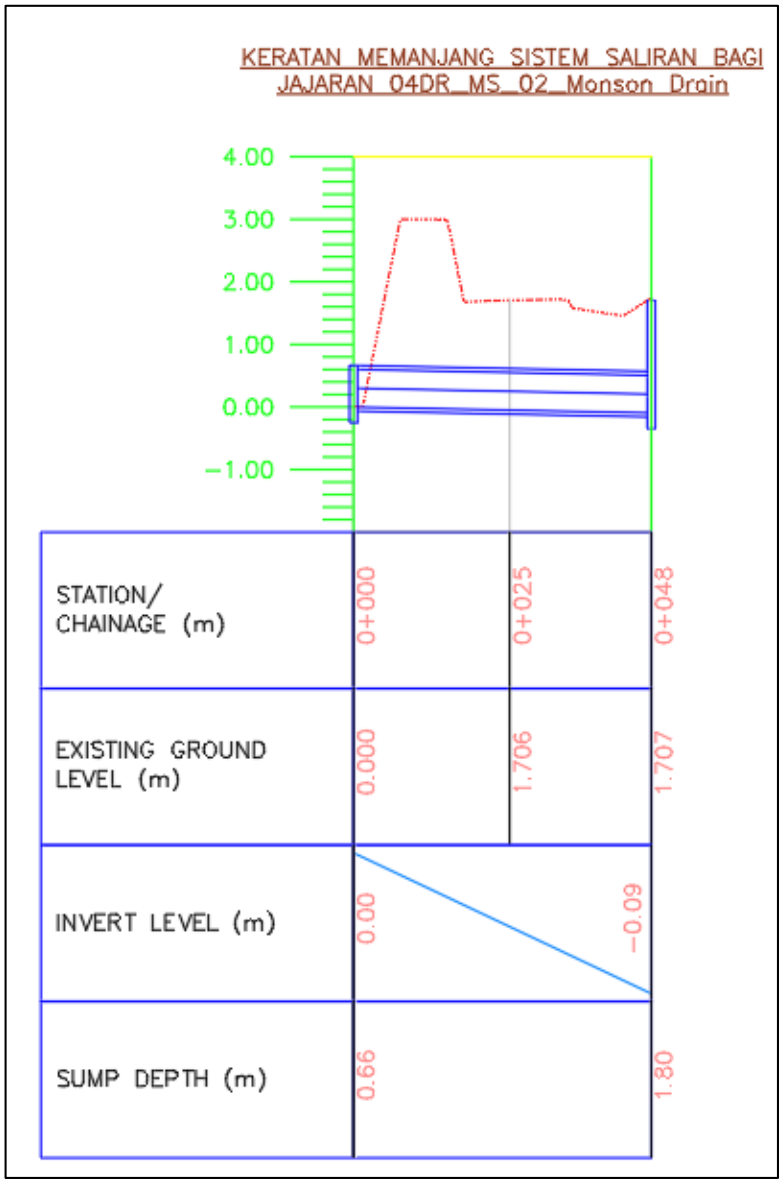
   v. Pipe/ Pressure network
   - Choose all 04DR_01_Monson Drain > next

   vi. Data bands
   - Select band set: 03 Drainage band set > next

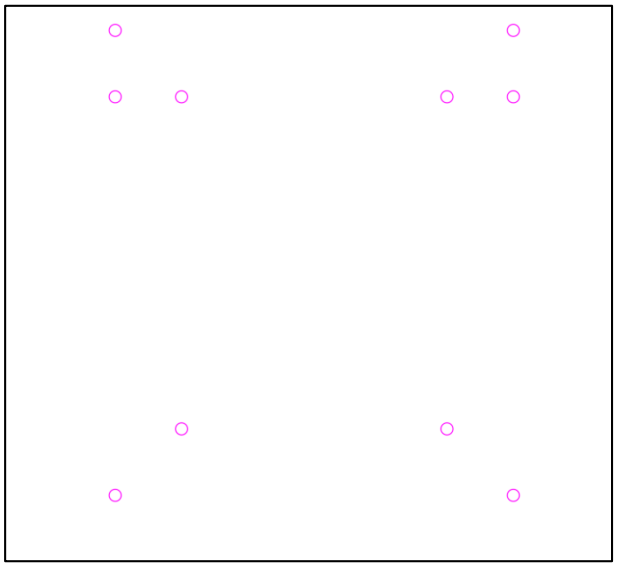
   vii. Profile hatch options
   - Use default > Create profile view

   Rajah 4a
5. LA > enter
6. Turn on layer > 08_Mark Subassembly
   Rajah 6a
7. Home tab > draw panel > polyline > klik pada titik bulatan (akan nada 2 polyline)
   Rajah 7a
   Rajah 7b
8. Klik polyline > add vertex
   Rajah 8a
9. Klik bulatan pada polyline > RC > select similar > hide selected object
10. Home tab > create design panel > expand > create subassembly from polyline > select entities
    Rajah 10a
11. Isi jadual create subassemblies seperti berikut;
    i. Name: Square Drain_Body
    ii. Code set style: 02 JKR All Codes
    iii. Mid ordinate distance: 0.010m
    iv. Erase existing entities: Check > OK
12. Klik subassembly > add code > Enter code > Barrier > enter (buat pada semua bahagian polyline) Rajah 12a

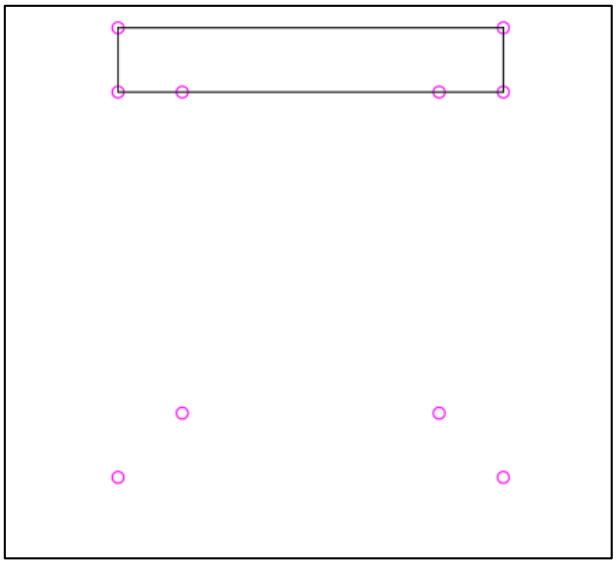
13. Klik assembly > add shape > klik pada semua link > enter
    Rajah 13a
14. Klik assembly > add code > Enter code > Barrier > klik pd tengah assembly > enter
15. Modify origin assembly
    Rajah 15a
16. Home tab > create design panel > expand > create subassembly from polyline > select entities > isi jadual create subassemblies seperti berikut;
    i. **Name:** Square Drain_Lid
    ii. **Code set style**: 02 JKR All Codes
    iii. **Mid ordinate distance**: 0.010m
    iv. **Erase existing entities**: Check > OK
17. Klik subassembly > add code > Enter code > Barrier > enter
18. Klik assembly > add shape > select shape > enter
19. Klik subassembly > add code > Enter code > Barrier > klik pd tengah subassembly > enter
    Rajah 19a
20. Klik subassembly > modify origin > klik hujung subassembly
    Rajah 20a
21. Home tab > create design panel > assembly > create assembly > sisi jadual seperti berikut;
    i. **Name:** 04DR_02_Monson Drain_Box Culvert
    ii. Alignment style: Basic
    iii. **Code set style:** 02 JKR All Codes
    iv. Klik OK
22. Klik subassembly (yg longkang tu) > add to assembly > klik pada assembly
23. Ulang langkah yang sama untuk another subassembly.
    Rajah 23a
24. Home tab > create design panel > profile > profile creation tools > klik tajuk profile 04DR_MS_02_Monson Drain > isi jadual seperti berikut;
    i. Name: Invert level
    ii. Profile style: 02 Design Profile
    iii. Profile label set: 01 No Labels > OK
25. Draw tangent
    Rajah 25a
26. Prospector tab > Corridor > 04DR_01_Monson Drain > RC > Properties > Isi jadual seperti berikut;
    i. Parameter tab
    - Add baseline
      Alignment: 04DR_MS_02_Monson Drain
    - Vertical baseline
      Rajah 26b
    - BL - 04DR_MS_02_Monson Drain – (5) > RC > Add region
      Rajah 26c
    - Frequency
      Rajah 26d
    - OK > rebuild corridor
    - Adjust Corridor
      Rajah 26e
27. Prospector > pipe network > network > 04DR_01_Monson Drain > structure > RC > Select > properties > style > 02 Drainage Reinforced Concrete Sump



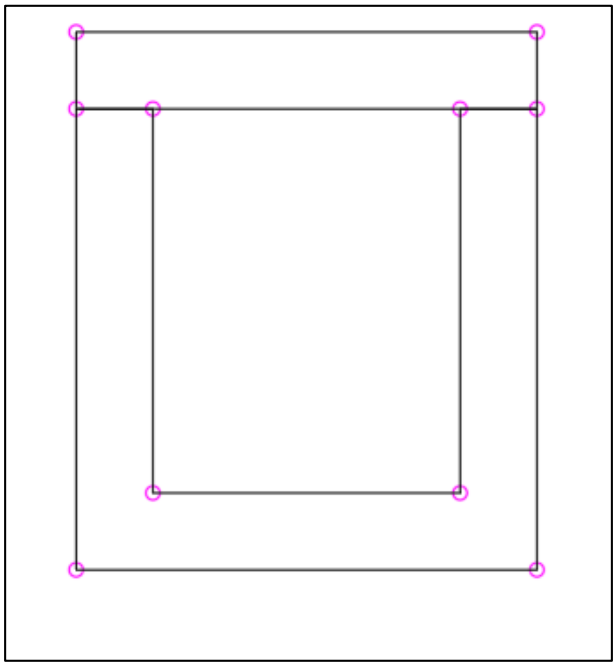
Rajah 4a



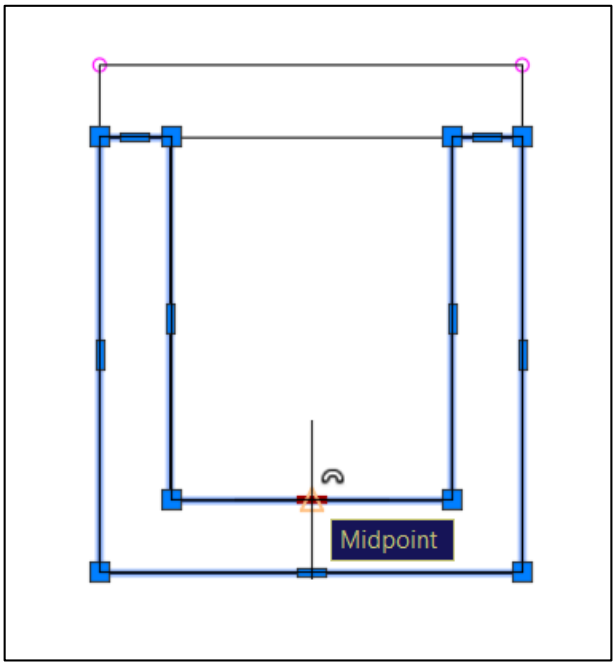
Rajah 6a



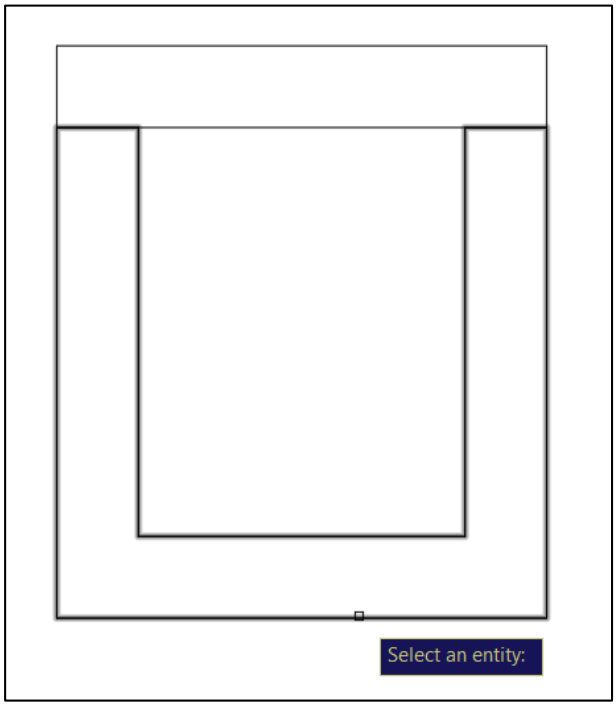
Rajah 7a



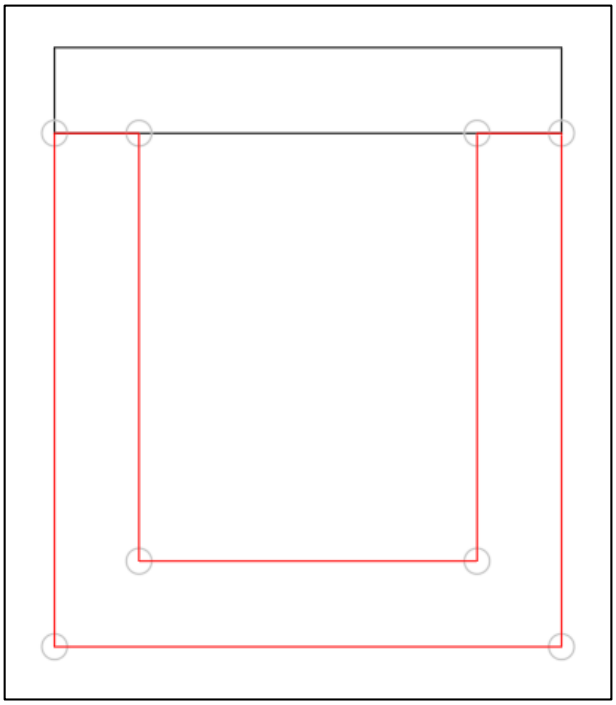
Rajah 7b



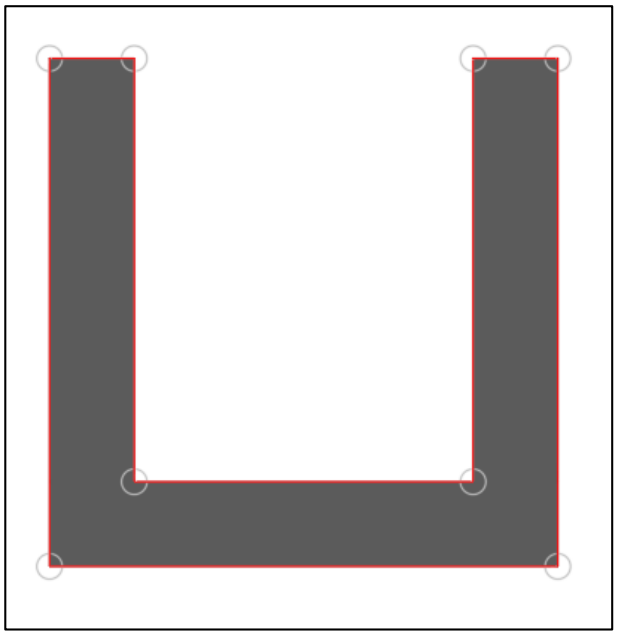
Rajah 8a



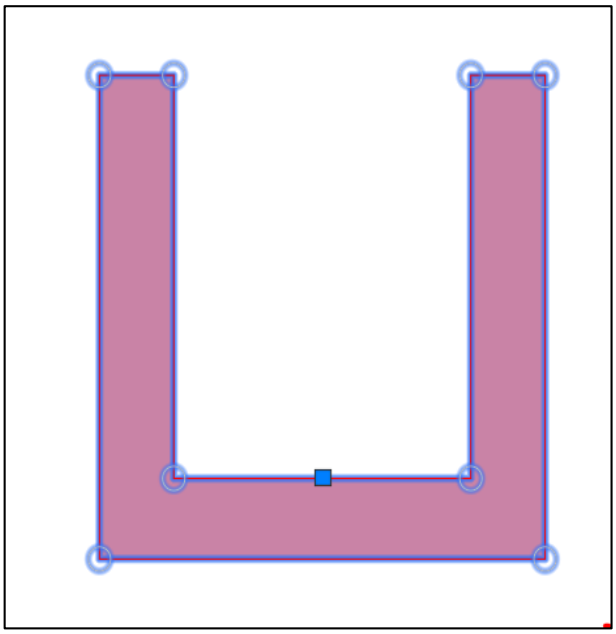
Rajah 10a



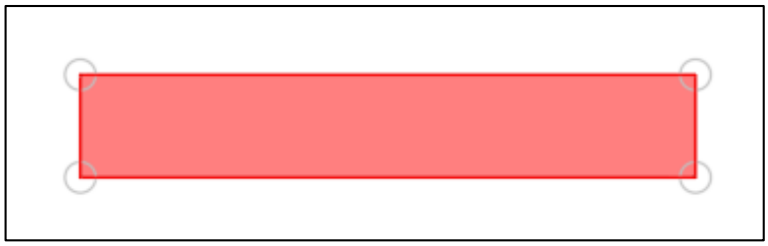
Rajah 12a



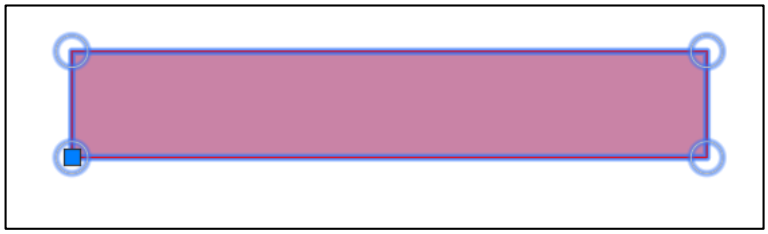
Rajah 13a



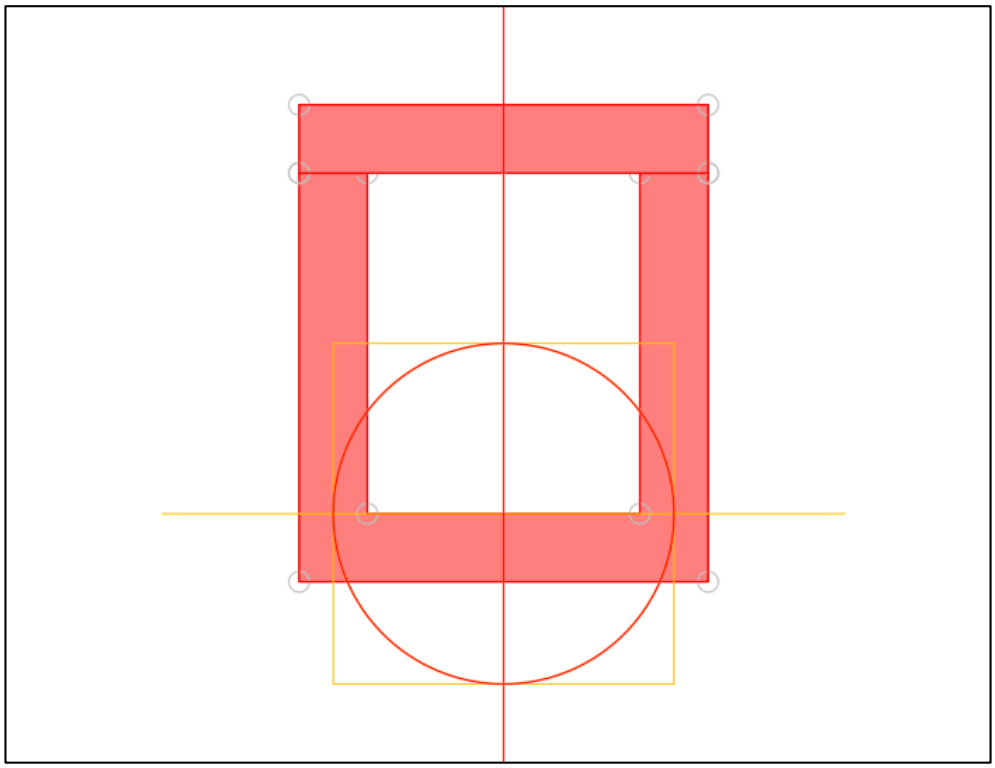
Rajah 15a



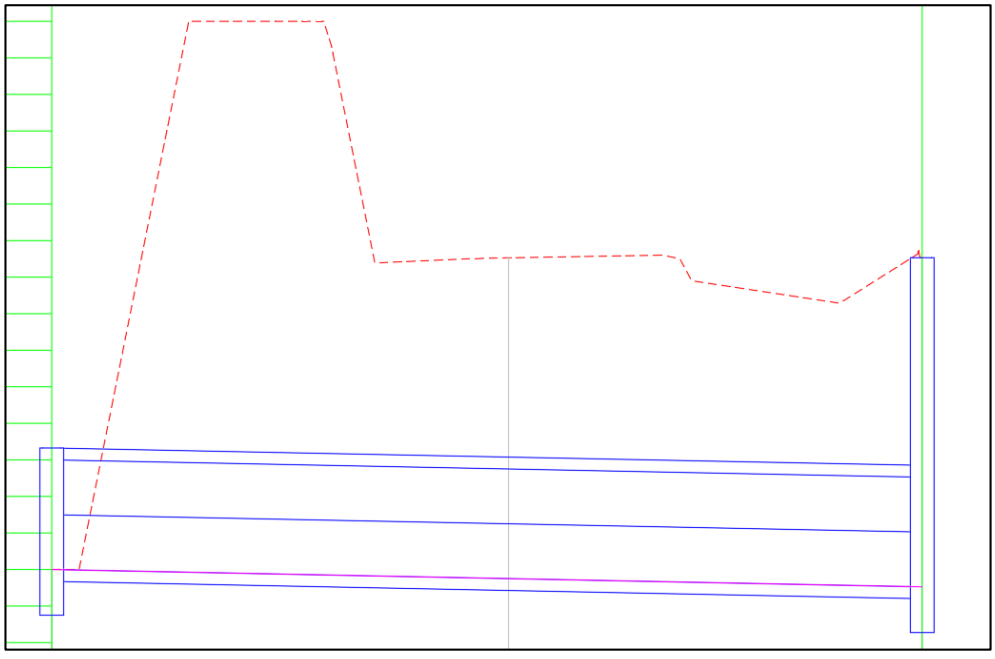
Rajah 19a



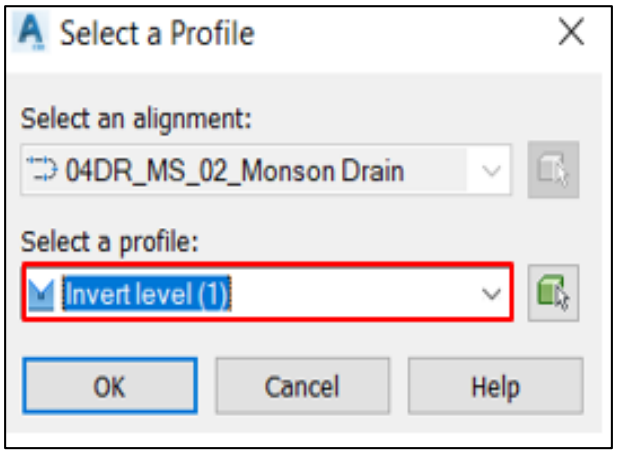
Rajah 20a



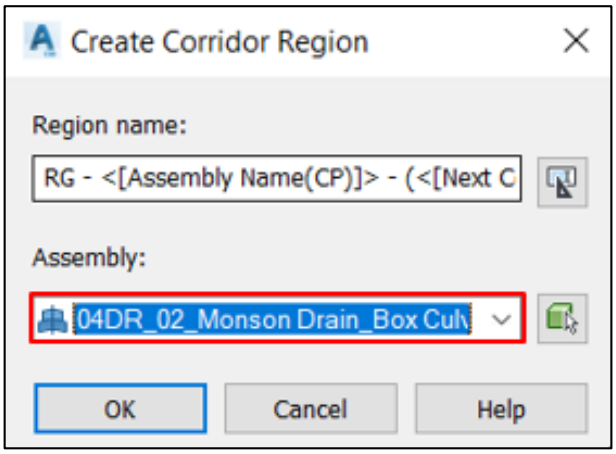
Rajah 23a



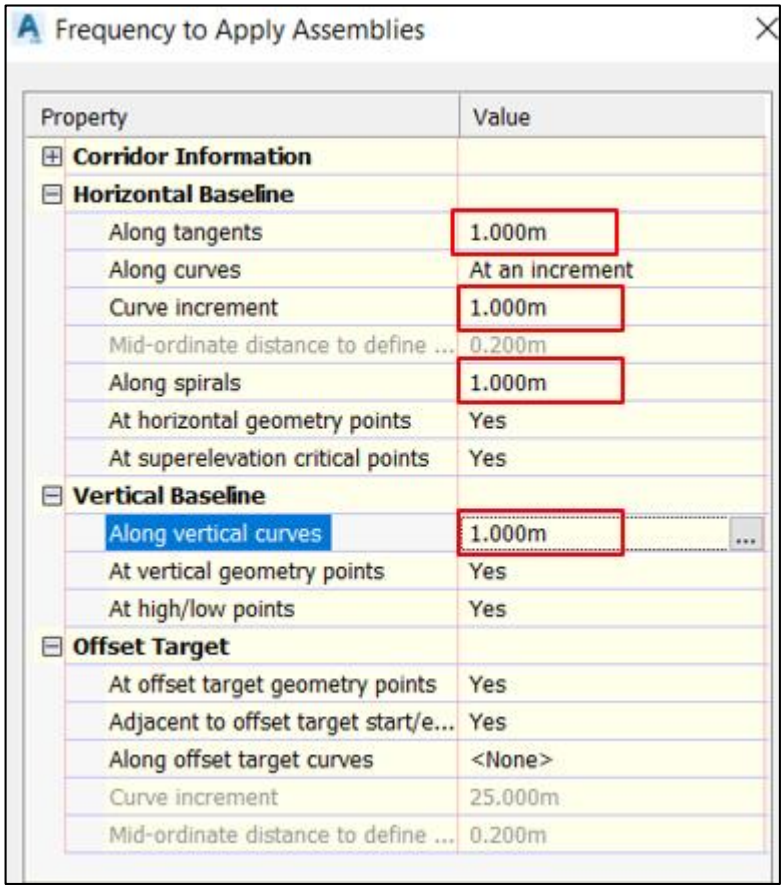
Rajah 25a



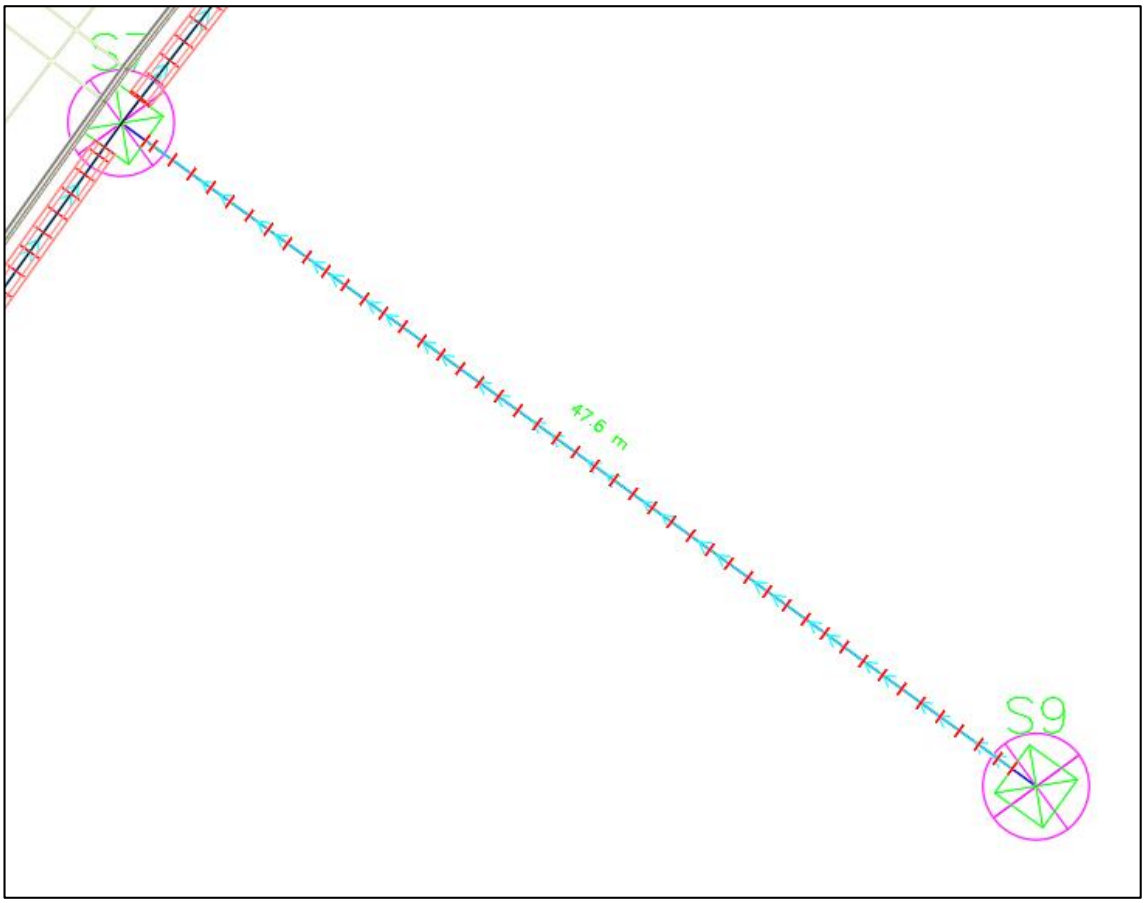
Rajah 26b



Rajah 26c



Rajah 26d



Rajah 26e

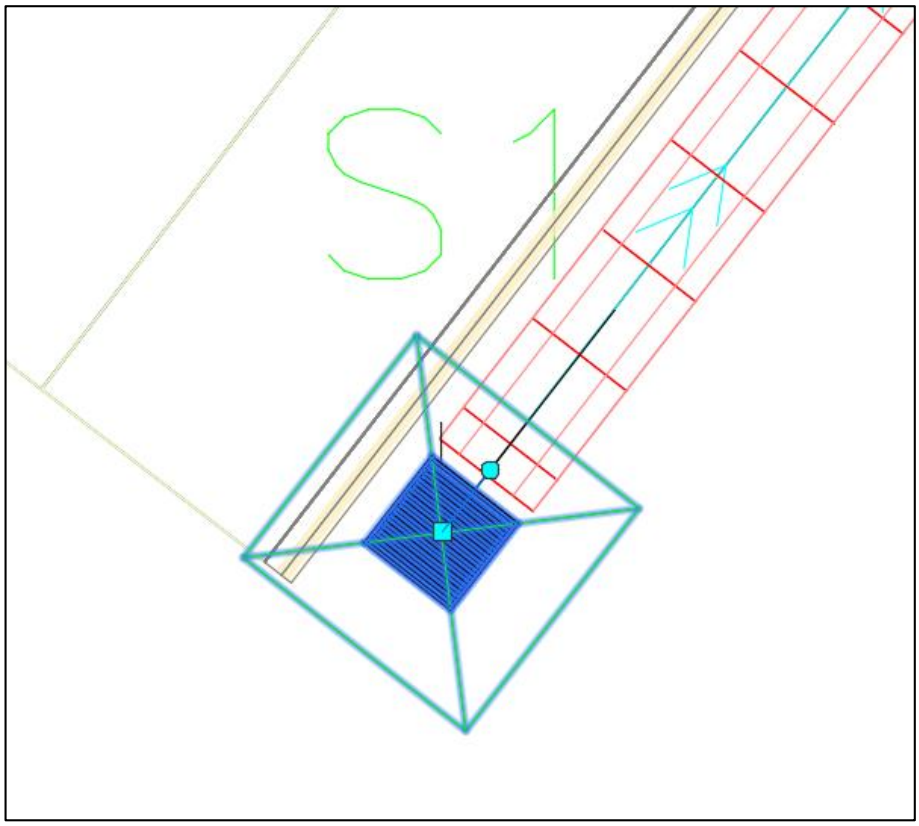
BAB 4: REKABENTUK TERPERINCI_PENGURUSAN MODEL

Grating

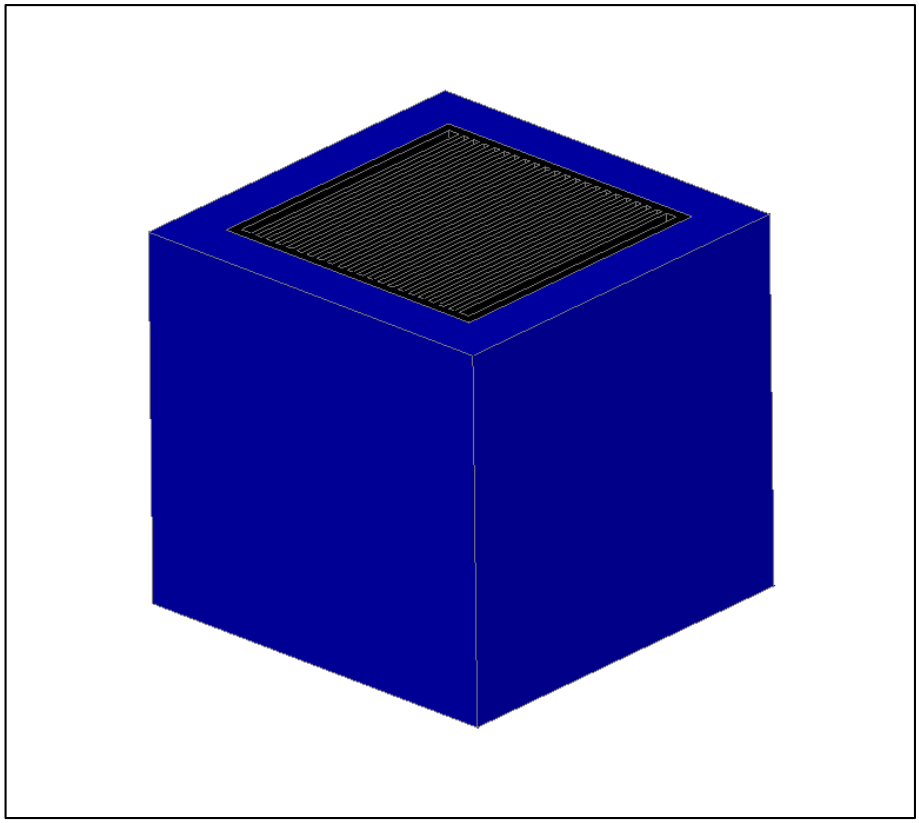
Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

1. Folder latihan > 04 Hospital Latihan_Rekabentuk Terperinci_Pengurusan Model > 01_WIP > C3D19_WIP_F0_04DR > open 2. Prospector tab > Data shortcut > RC > Set working folder > 04 Hospital Latihan_Rekabentuk Terperinci_Pengurusan Model 3. Tool pallete > RC > new palate > name > 3D block. 4. 04 Hospital Latihan_Rekabentuk Terperinci_Pengurusan Model > 06_ resources > 04 family > klik C3D18_dr_3d_MS Grating 975 x 975 > Drag ke tool pallete.	5. Tool pallete > Klik pallete > Letakkan pada S1. 6. Adjust kedudukan pallete supaya berada pada kedudukan yang betul. Rajah 6a 7. Klik Structure S1 dan pallete > RC > isolate selected object > adjust position Rajah 7a 8. Top view > RC > end isolation 9. Ulang langkah yang sama untuk S2 sehingga S8



Rajah 6a



Rajah 7a

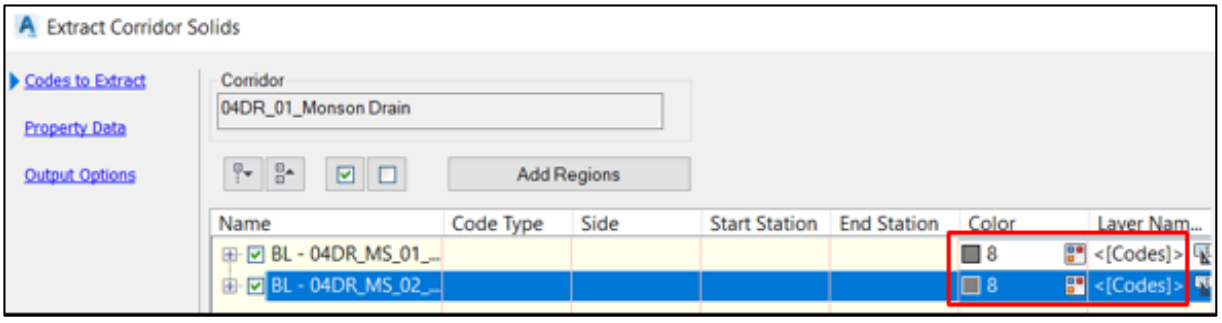
BAB 4: REKABENTUK TERPERINCI_PENGURUSAN MODEL

Extract Solid

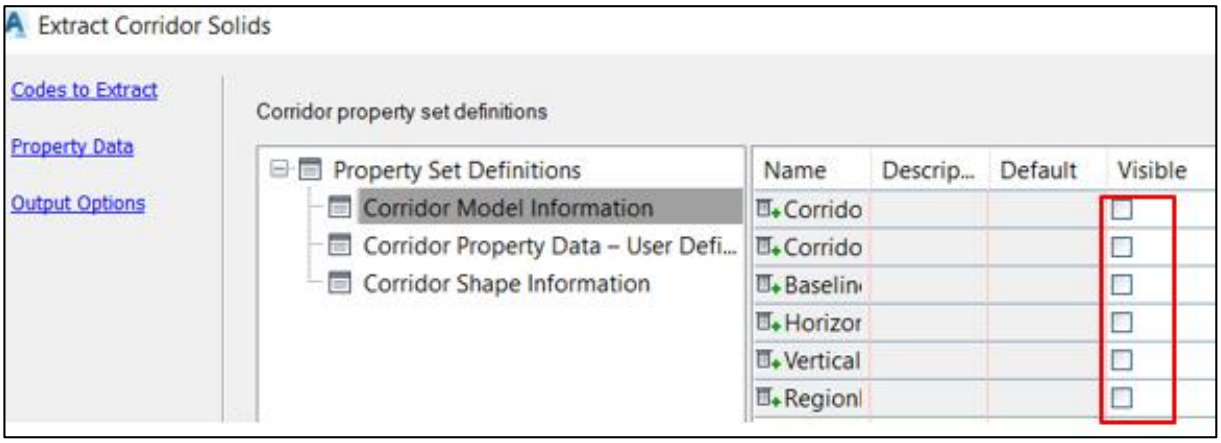
Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

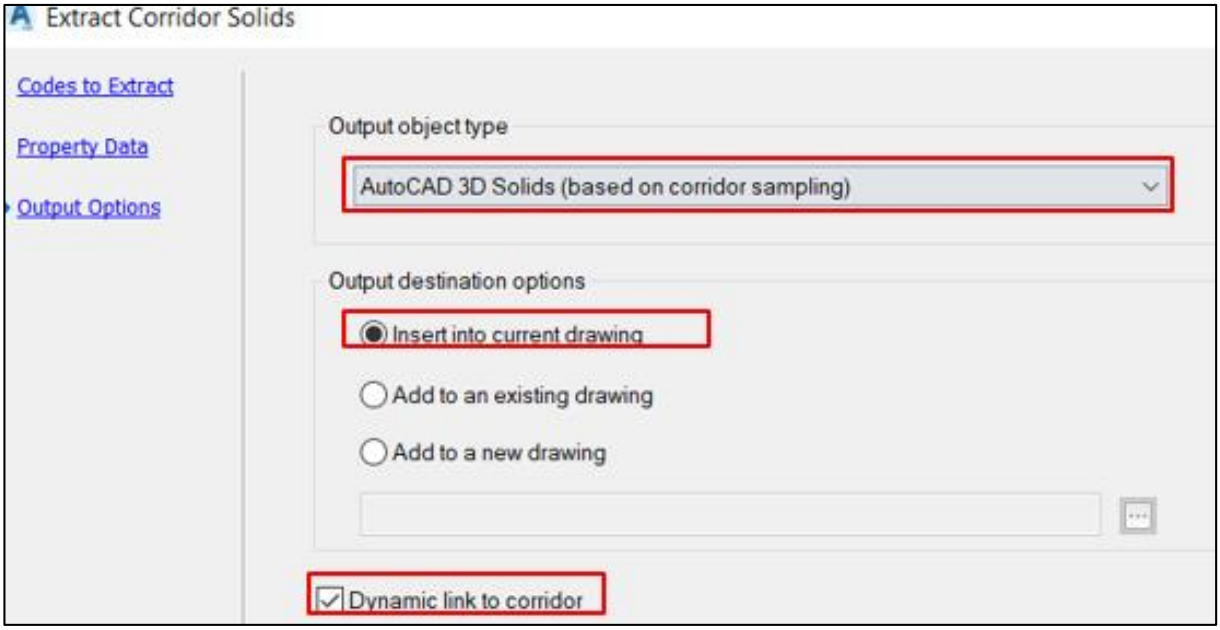
1. Klik corridor 04DR_01_Monson Drain tab > extract corridor solids tools > all region > Extract corridor solid dialog box;
   - i. **Codes to extract**
     Rajah 1a
   - ii. **Property Data**
     Rajah 1b
   - iii. **Output options**
     Rajah 1c
2. Klik corridor > select similar > object viewer.
3. Create layer baru seperti berikut;
   - i. Sump
   - ii. Drain
   - iii. Culvert
4. Klik grating > Rc > select similar
5. Properties > layer > grating 600x600
6. Klik sump > RC > select similar
7. Properties > layer > sump
8. Klik semua internal drain > peroperties > layer > drain.
9. Klik paip culvert > select similar > properties > layer > culvert.
10. Xref > enter > Detach fail > C3D18 WIP F0 03RD.
11. La > enter > turn off all layer
12. Layer properties > turn on layer berikut;
    - i. Barrier
    - ii. Grating
    - iii. DR-DRN
    - iv. Drain
    - v. Culvert
    - vi. ACAD-TB
    - vii. Sump
      Rajah 12a
13. Select model > RC > object viewer
14. Layer states manager dialog box > new > new layer state name > pengurusan model > ok



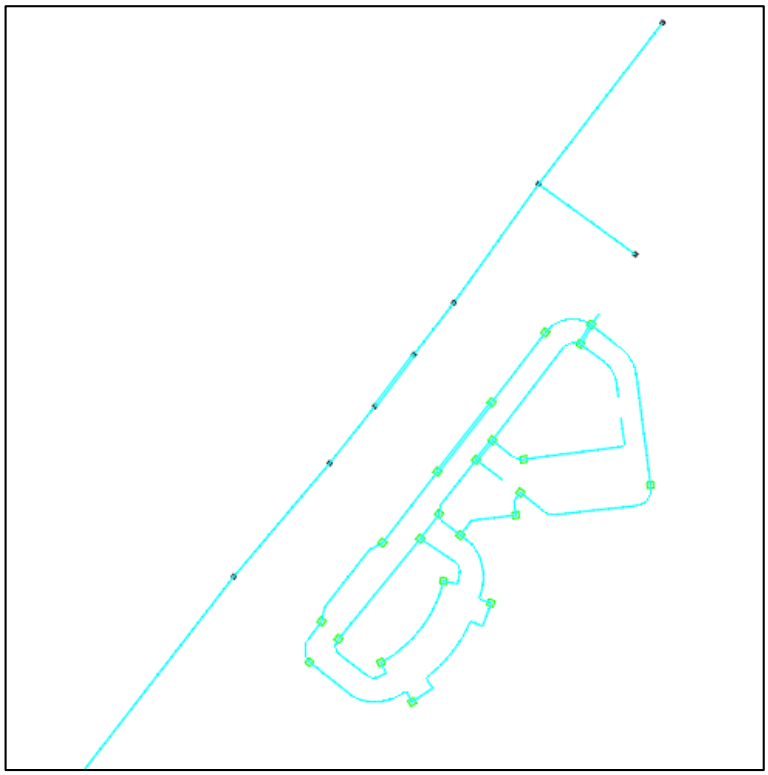
Rajah 1a



Rajah 1b



Rajah 1c



Rajah 12a

BAB 4: REKABENTUK TERPERINCI_PENGURUSAN MODEL

Property Data

Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

1. Taip Property data > sets
2. Style manager dialog box > documentation objects > property set definitions > RC > new > culvert > isi maklumat seperti berikut;
   - **i. General tab**
     Name: Grating
   - **ii. Applies to tab**
     Objects: Block Reference > apply
   - **iii. Definition tab**
     Add manual property definition
     - **Name**: Bahan > ok

     Add manual property definition
     - **Name:** Katalog> ok

     Add manual property definition
     - **Name:** Nama Pembekal> ok

     Add manual property definition
     - **Name:** No. Tel. Pembekal> ok

     Add manual property definition
     - **Name**: Tarikh Pasang> ok

     Add manual property definition
     - **Name:** Tarikh waranty> ok

     Add manual property definition
     - Volume > ok > apply
3. Copy culvert > paste > rename > Sump
   - **i. Applies to tab**
     Objects: Structure > apply
4. Copy culvert > paste > rename > Internal Drain
   - **i. Applies to tab**
     Objects: Pipe > apply
5. Copy culvert > paste > rename > Internal Drain
   - **i. Applies to tab**
     Objects: Solid (3D) > apply >
6. Copy culvert > paste > rename > Monson Drain
   - **ii. Applies to tab**
     Objects: Solid (3D) > apply > ok > esc
7. Klik monson drain> select similar
8. Properties > extended data > add property sets > check item berikut;
   i. General
   ii. Monson Drain
   iii. Klik OK
9. Klik grating > select similar
10. Toolspace > extended data > add property sets > check item berikut;
    i. General
    ii. Grating
    iii. Klik OK
11. Klik sump > select similar
12. Toolspace > extended data > add property sets > check item berikut;
    i. General
    ii. Sump
    iii. Klik OK
13. Klik culvert > select similar
14. Toolspace > extended data > add property sets > check item tersebut;
    i. General
    ii. Culvert > ok

15. Klik internal drain > select similar 16. Toolspace > extended data > add property sets > check item tersebut; i. General ii. Internal drain iii. Klik OK 17. Taip nwcout > enter	17. Export to > Folder latihan > 04 Hospital Latihan_Rekabentuk Terperinci_Pengurusan Model > 02_SHARE > name > jkrCv19_1_(BMhpB1_19_001)_F1_Dr00_(s)_190101 > save. 18. Buka perisian Naviswork > append model jkrCv19_1_(BMhpB1_19_001)_F1_Dr00_(s)_190101

BAB 5: REKABENTUK TERPERINCI_PENJANAAN LUKISAN

Penjanaan Lukisan

Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

1. Folder latihan > 05 Hospital Latihan_Rekabentuk Terperinci_Penjanaan Lukisan > 01_WIP > C3D19_WIP_F0_04DR > open.
2. Prospector tab > Data shortcut > RC > Set working folder > 05 Hospital Latihan_Rekabentuk Terperinci_Penjanaan Lukisan > select folder
3. Layer properties > turn on all layer
4. Application menu > drawing utilities > drawing properties > isi maklumat seperti berikut;

i. **Summary tab**
- Title: Projek Membina dan Menyiapkan Hospital Latihan
- Author: Jack Sparrow

ii. **Custom tab**
- Disemak: Zainariah
- Dilukis: Izzati
- Pengarah Kanan: Jony Tony
- Pengarah Khidmat Pakar dan Pengurusan: Jul Ripin
- Jurutera Awam Penguasa Kanan: Rosnah
- Jurutera Awam Penguasa: Mael
- Jurutera Awam Kanan: c
- No. Fail Projek: JKR.CPAB.900.003.000
- Klik OK

5. Layout tab > check maklumat pada layout sheet
6. Layer properties > turn off layer berikut;
   i. 01_Mark Monson Drain
   ii. 02_Mark Internal Drain 1
   iii. 02_Notes
   iv. 03_Map
   v. 03_Mark Internal Drain 2
   vi. 04_Mark Internal Drain 3
   vii. 05_Mark Internal Drain 4
   viii. 06_Mark Internal Drain 5
   ix. 06_Simbol
   x. 07_Mark Internal Drain 6
   xi. 08_Mark Subassembly
   xii. Barrier
   xiii. C- ROAD- CORR
7. Layer Properties > turn off & freeze layer > C-TOPO
8. Xref > attach drawing > 05 Hospital Latihan_Rekabentuk Terperinci_Penjanaan Lukisan > 05_ Incoming > jkrAR_01(BMhpB1_19_001)_A1_WT01_(s)100101 > Open > locate using geographic data > OK

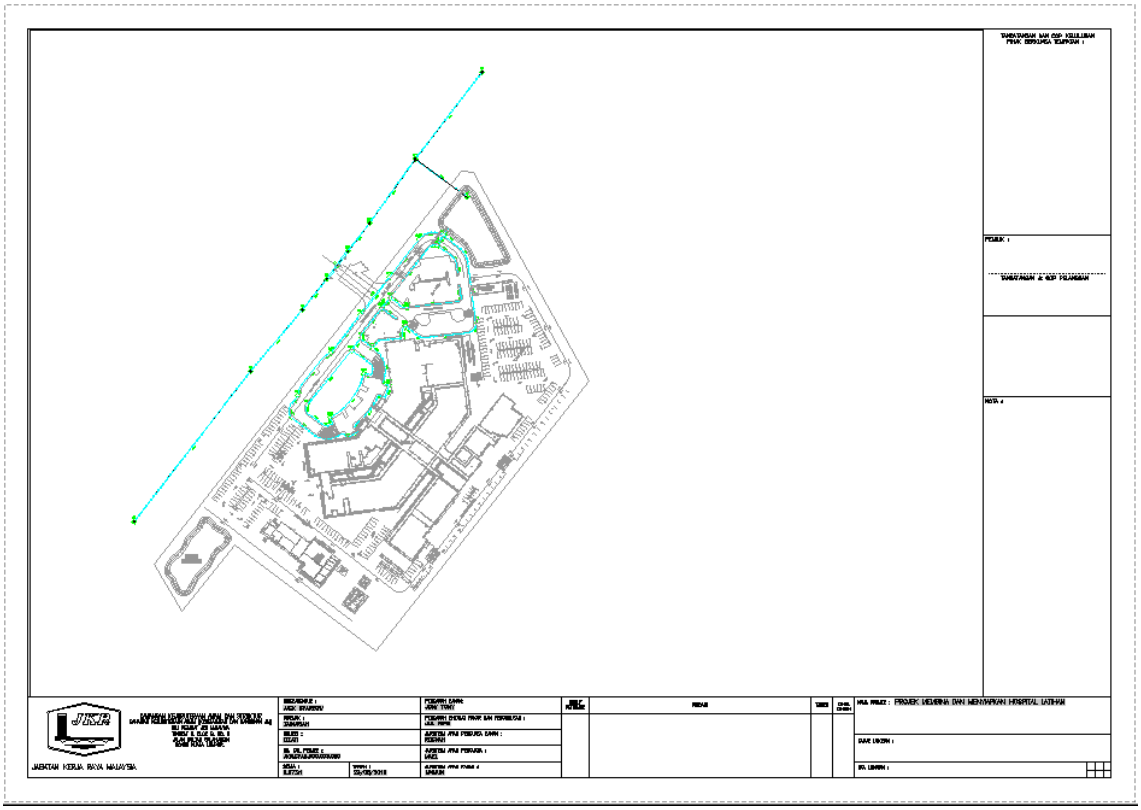
BAB 5: REKABENTUK TERPERINCI_PENJANAAN LUKISAN

Create Layout

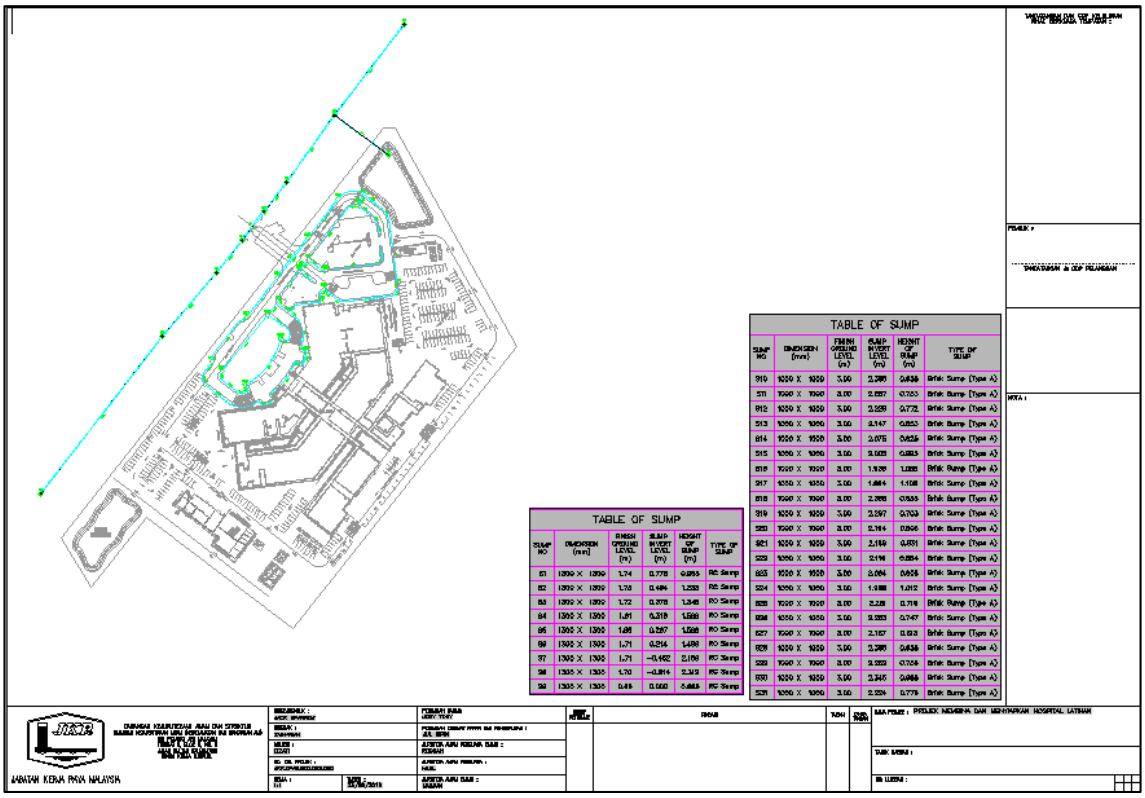
Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

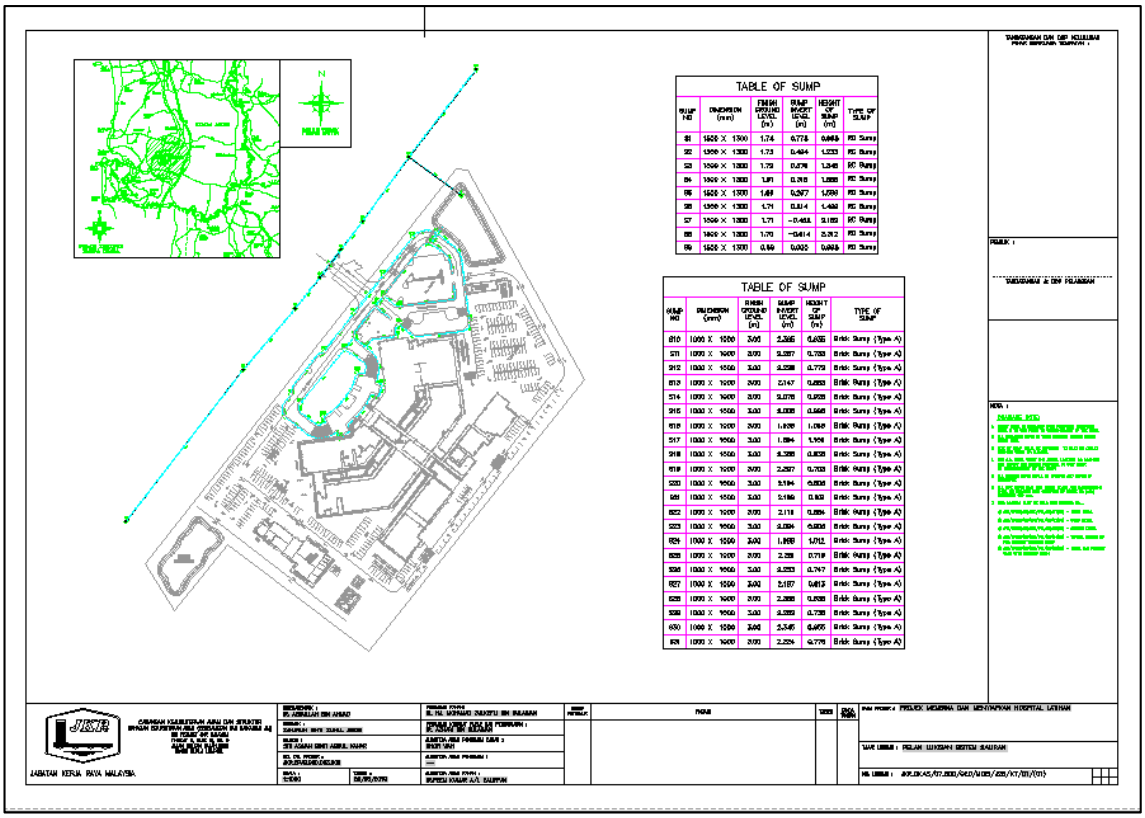
1. Layout tab > DC klik viewport > ze > enter > Scale Plan > 1:1000 > Lock view Rajah 1a 2. Klik viewport > add rectangular > Pilih table sump > adjust table. Rajah 2a Rajah 3a	



Rajah 1a



Rajah 2a



Rajah 3a

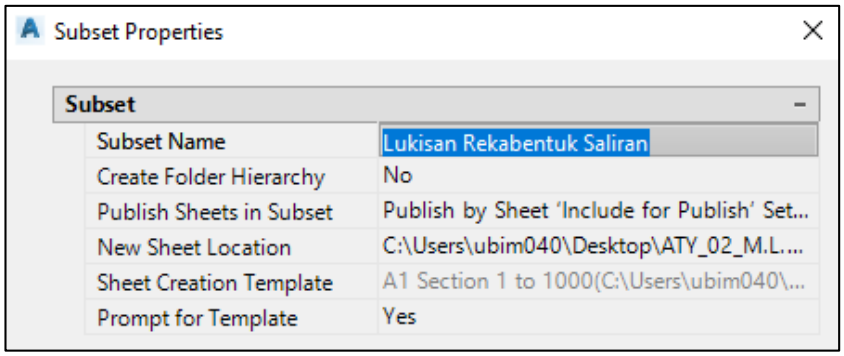
BAB 5: REKABENTUK TERPERINCI_PENJANAAN LUKISAN

Sheet Set Manager

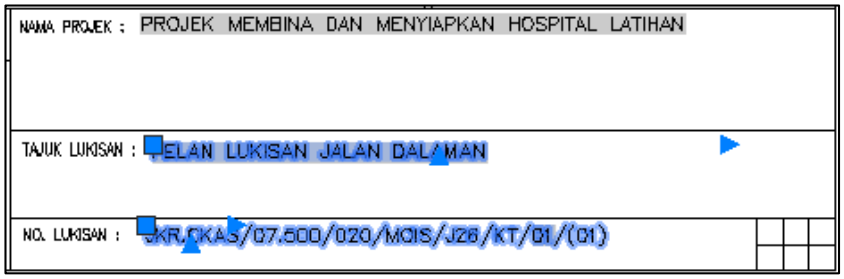
Fail latihan: C3D19_WIP_F0_04DR.dwg.

ARAHAN:

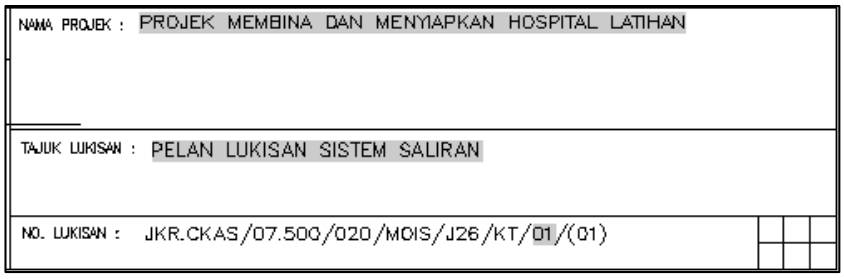
1. Home tab > expand palette panel > sheet set manager
2. Sheet Set manager > open file > 01_WIP > HOSPITAL LATIHAN > Open
3. Sheet set manager > sheet > hospital latihan > RC > new subset
4. Subset properties > Subset name > Lukisan Rekabentuk Saliran > klik ok
   Rajah 4a
5. Sheet set manager > sheet > hospital latihan > lukisan rekabentuk saliran > Rc > Import layout as sheet > browse for drawing > C3D19_WIP_F0_04DR > open > import check
6. Lukisan Rekabentuk saliran > layout >RC > rename & renumber > isi maklumat jdual seperyi berikut;
   i. **Number**: 01
   ii. **Sheet title:** Pelan lukisan sistem saliran
   iii. Klik OK
7. Lukisan rekabentuk jalan dalaman > 01-Pelan lukisan jalan dalaman > copy clipboard with base point> tajuk lukisan & no. lukisan
   Rajah 7a
8. Lukisan Rekabentuk saliran > Pelan lukisan sistem saliran > paste >rea
   Rajah 8a
9. Pelan lukisan sistem saliran tab > RC > page setup manager
10. Page setup manager > klik pelan lukisan sistem saliran (A1 Setup) >modify > isi table seperti berikut;
    i. **Plot style table:** monochrome.ctb
    Rajah 10a
    ii. Klik OK
11. Sheet set manager > sheet > hospital latihan > RC > resave all sheets
12. Lukisan Rekabentuk saliran > Rc > Publish > Publish to DWF
13. Save in > 05 Hospital Latihan_Rekabentuk Terperinci_Penjanaan Lukisan > 03_Publish > jkrCv19_1_(bMhpB1_19_001)F1_DR_190101 > select
14. 05 Hospital Latihan_Rekabentuk Terperinci_Penjanaan Lukisan > 03_Publish > open file > jkrCv19_1_(bMhpB1_19_001)F1_DR_190101



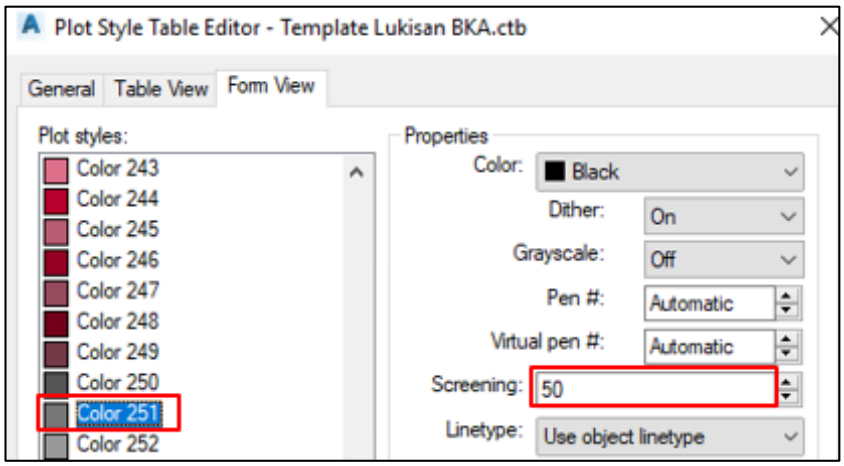
Rajah 4a



Rajah 7a



Rajah 8a



Rajah 10a