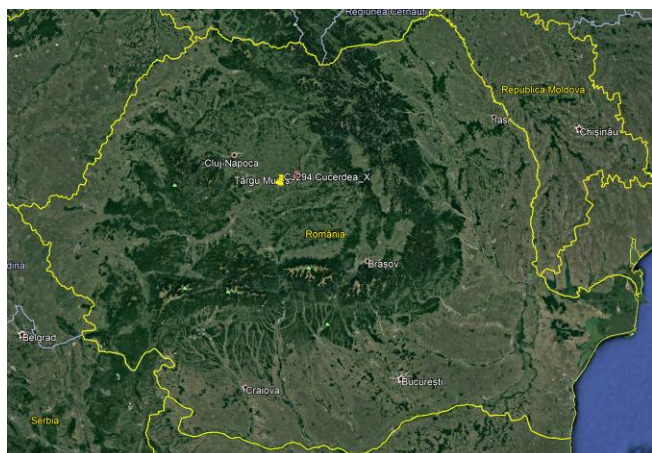




SITE SURVEY REPORT Ericsson

1. GENERAL INFORMATION

Site name:	CUCERDEA_X
Site number (code):	CJ294
Site address (city;street;no.; building; entrance):	extravilan loc. Seulia de Mures
Site area:	Mures
Site survey team:	ATS
Checked by:	Vasile Pol
Date of site survey:	03.11.2017
Type of Site (urban, rooftop):	Greenfield
Lesser:	-
Contact Person:	-



Other Remarks:	Cheile se iau de la sediul Ericsson din TARGU MURES. Accesul spre site se face de pe DJ84, din loc. Seulia de Mures la stanga pe durm comunal de pamant. Este necesar 4x4 din cauza urmelor de roti.
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2. ROOFTOP (Building information)

GPS coordinates:	N E	
Building height:		m
Existent tripod:	Yes <input type="checkbox"/> NO <input type="checkbox"/>	
Total height:		m
Use of crane for materials transportation:	Yes <input type="checkbox"/> NO <input checked="" type="checkbox"/>	

Other Remarks:	
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3. GREEN FIELD (Specific data information)

GPS coordinates:	N 46° 24' 48.6"
	E 24° 15' 16.9"
Tower:	Yes <input checked="" type="checkbox"/> NO <input type="checkbox"/>



Tower type:	<input type="checkbox"/> Heavy Cosmosite tower – 50m (or more) <input type="checkbox"/> Polygonal Monopole – 30m (or more) <input type="checkbox"/> Monopole lattice tower - 30m <input checked="" type="checkbox"/> Guyed tower on shelter - 30m
Antenna Metallic Structure:	New "H" Yes <input type="checkbox"/> NO <input checked="" type="checkbox"/> Upgrade existing "H" Yes <input type="checkbox"/> NO <input checked="" type="checkbox"/> Atypical Structure Yes <input type="checkbox"/> NO <input checked="" type="checkbox"/>
RRU Metallic Structure:	New RRU Support Yes <input type="checkbox"/> NO <input checked="" type="checkbox"/> Atypical Structure Yes <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Mini - shelter require:	Yes <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Mini – shelter frame standard adaptor solution:	Yes <input type="checkbox"/> NO <input checked="" type="checkbox"/>
In case Non Standard Mini-shelter frame solution, dimensions are requested:	N/A
Non standard mini - shelter frame profile	N/A
RRU to Antenna/Combiner Jumper length (type: DIN7/16 Male –N Male):	6x3m;
Antenna to Combiner -> Jumper length (type: DIN7/16 Male – DIN7/16 Male):	N/A
FO cable length between BB to RRU	3x40m
DC cable length between PDU to RRU	3x40m
Type and length of DC power for RRU Cu 2x6 mm ² (L<30m):	-
Type and length of DC power for RRU Cu 2X10 mm ² if needed(30m<L<60m):	Type Cu 2x10mm ² / 3x40m
Type and length of DC power for RRU Cu 2X16 mm ² if needed(60m<L<90m):	-
Type and length of DC power for RRU Cu 2X25 mm ² if needed(L>90m):	-
Combo Box required:	Yes <input type="checkbox"/> NO <input checked="" type="checkbox"/> ; Length of cable: m
Connection patch length from CB to RRU (FO&DC)	-
Outdoor CB existing breakers type	16A <input type="checkbox"/> 25A <input type="checkbox"/> Oth. <input type="checkbox"/> 32A
PDU existing breakers availability (63A in PP)	Yes <input checked="" type="checkbox"/> NO <input type="checkbox"/>
DC cable length from PP to new PDU	4x5m
PP Type / producer plus picture on the bottom	SUNLIGHT

4. EXISTING CONTRACT & CHANGES

Indoor space requires contract change	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Outdoor space requires contract change	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Cable routing requires contract change	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Power cabling requires contract change	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Indoor space requires studies & license change	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Outdoor space requires studies & license change	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Cable routing requires studies & license change	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Power cabling requires studies & license change	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

Other Remarks:	
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5. POWER SUPPLY INFORMATION

Power availability:	YES					
Voltage-measurements (PLC display):	L1(V)	231	L2(V)	226	L3(V)	234
Amperage-measurements (PLC display, without A/C):	I1(A)	3.16	I2(A)	3.54	I3(A)	0
Amperage-measurements (PLC display, with A/C):	I1(A)	-	I2(A)	-	I3(A)	-
Outdoor mini shelter: 32A available breaker in LDB (5x6 mm ² AC Cable)	N/A					
1X16A available breakers in indoor Power System	NO					



1X32A available breakers in indoor Power System	NO
2X63A available breakers in indoor Power System	Yes
Power counter exist:	Yes
Main AC board exist:	Yes
Breaker value in BMPT:	N/A
Surge arrestors existence:	Yes
Type and length of power connection cable for BBU	Cu 2x2.5mm ² - 3m
Type and length of power connection shielded cable Al 6X25 mm ² if needed:	-
Type and length of power connection shielded cable Al 6X35 mm ² if needed:	-
Type and length of AC power connection cable 5X6 mm ² for mini shelter if needed:	-
Type and length of DC power from PSU to PDU Al 2x35 mm ² if needed:	2x5m
CB/PDU/2 Sections (if needed):	-
CB/PDU/3 Sections (if needed):	-
PDU indoor (if needed):	YES
Boards grounding - secured:	YES
Boards waterproofed:	YES

Other Remarks:	
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6. POWER PLANT and BATTERY INFORMATION

Number of units	Unit 1 <input checked="" type="checkbox"/>	Unit 2 <input type="checkbox"/>
Type	300A <input type="checkbox"/> 600A <input type="checkbox"/> Other <input checked="" type="checkbox"/>	300A <input type="checkbox"/> 600A <input type="checkbox"/> Other <input type="checkbox"/>
Nr./capacity[A] of rectifier modules	4/50A	
DC Load Amperage(displayed) [A]	19A	
Battery capacity [Ah]	160Ah	
Battery type/number	Monolite 12FFT160/8	

Other Remarks:	
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7. AIR CONDITIONING INFORMATION

Temperature [°C]	Internal: 22.1°C	External: 7.0°C
Number of units	Unit 1 <input checked="" type="checkbox"/>	Unit 2 <input type="checkbox"/>
Type	Free Cooling <input type="checkbox"/> Duct <input checked="" type="checkbox"/> Split <input type="checkbox"/>	Free Cooling <input type="checkbox"/> Duct <input type="checkbox"/> Split <input type="checkbox"/>
Technical specifications from external unit label	FUJITSU – AOY25UNANL	
Cooling capacity [BTU]	9.000 <input type="checkbox"/> 12.000 <input type="checkbox"/> 18.000 <input type="checkbox"/> 24.000 <input checked="" type="checkbox"/> Other <input type="checkbox"/>	9.000 <input type="checkbox"/> 12.000 <input type="checkbox"/> 18.000 <input type="checkbox"/> 24.000 <input type="checkbox"/> Other <input type="checkbox"/>
Start meter	Compressor: 0 Evap. Fan: 0 Heather: 17647	Compressor: Evap. Fan: Heather:



Work time meter [h]	Compressor: 4100 Evap. Fan: 62761 Heather: 430	Compressor: Evap. Fan: Heather:
Alarms outputs	Very high temp <input type="checkbox"/> Very low temp <input type="checkbox"/>	Very high temp <input type="checkbox"/> Very low temp <input type="checkbox"/>

Other Remarks:	
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8. NEW INSTALLATION INFORMATION

Common: number of buss with free holes	3
Common: Available space on the existing cable tray	YES
Indoor equipment: Existing space for ILP mounting	N/A
Indoor equipment: Existing space for Radio Indoor equipment mounting	N/A
Indoor equipment: Existing space for Indoor Concentrator equipment mounting	N/A
Indoor equipment: Existing space for DC PDU mounting	YES
Indoor equipment: Available holes in FIMO	YES
Outdoor equipment: Existing space on the existing base frame for mini shelter mounting	N/A
Outdoor equipment: Existing outdoor transmission cabinet	N/A
Outdoor equipment: Existing space for outdoor Concentrator mounting (proposal)	N/A
Outdoor equipment: Existing space for RRU mounting (proposal)	YES

Other Remarks:	
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9. EXISTING TELECOM EQUIPMENT & INFRASTRUCTURE

a. General information

Equipment type:	Indoor <input checked="" type="checkbox"/>	Outdoor <input type="checkbox"/>	
Number of RF antennas:	3		
Number of MW links	4		
Nr. of existing RBS cabinets	1xRBS2206		
MW existing RL cabinet	Indoor <input checked="" type="checkbox"/>	Outdoor <input type="checkbox"/>	
Power cabinet exist (BBS):	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Existing cable ladder availability:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Existing cable entry availability:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Air condition existence & operation	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Grounding protection existence:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Lightning protection existence:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Installation of RF & IF cables requires special machinery (e.g. crane)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

b. Existing Masts

	Height	Length	poles/mast	Cell_id on the mast	installation readiness
1					
2					
3					
4					

c. Existing Antenna Poles

	Height	Length	Cell_id	Corner/Tower	Obstacles	installation readiness
1	27.0m	3m	U		No	Yes
2	27.0m	3m	V		No	Yes



3	27.0m	3m	W		No	Yes
4						
5						

d. Existing MW Poles

	Height	Length	Hop id	Corner/Tower	Far end	Obstacles	installation readiness
1	24.0m	3m					
2							
3							
4							
5							

Remarks:	
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10. ANALYSIS LOADING DATA

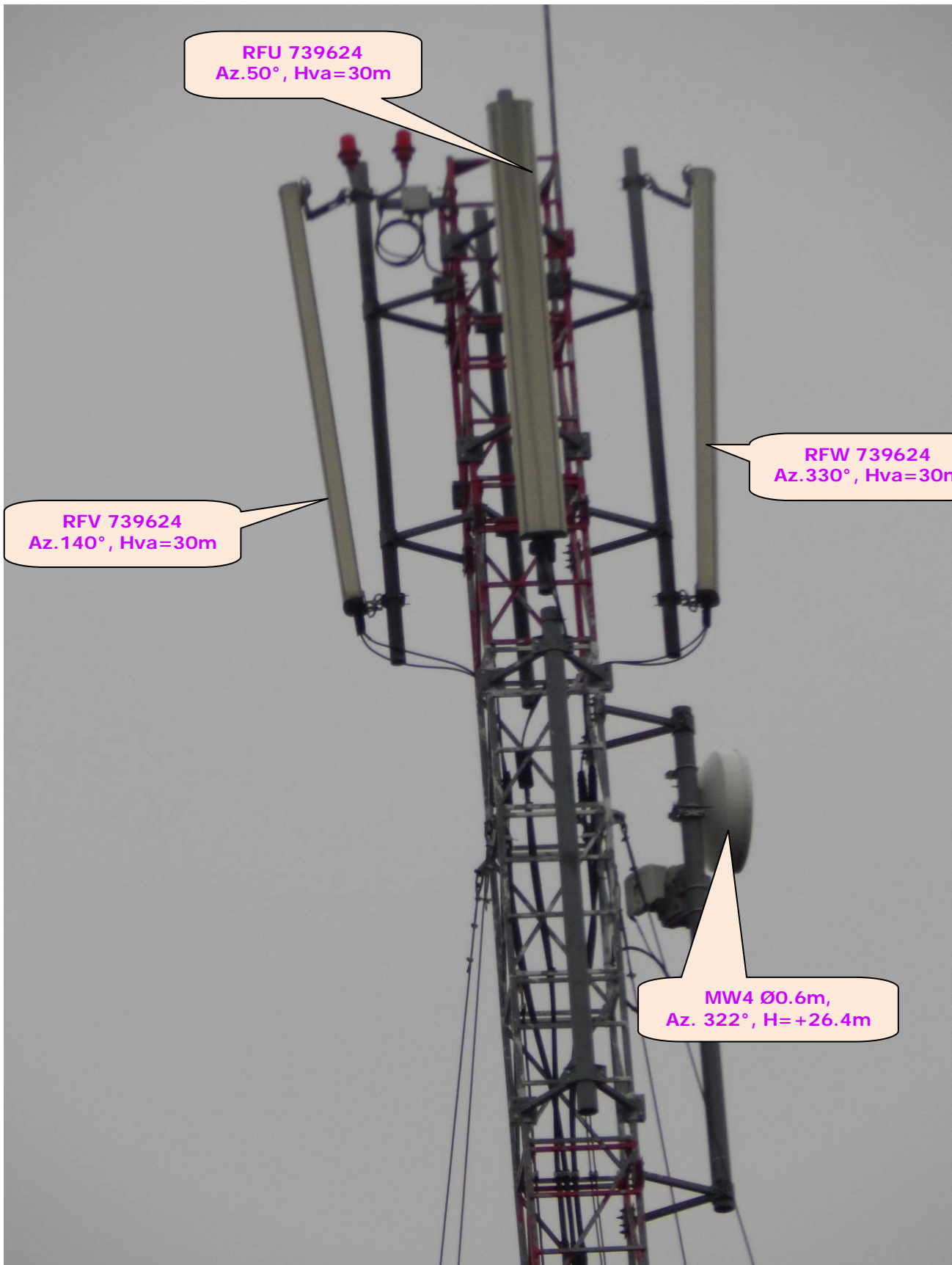
LOAD TYPE	DIAMETER (mm)	POSITION (m)	NUMBER
M/W LINK	1.8m	4.7m	1
M/W LINK	0.3m	5.0m	2
M/W LINK	1.2m	4.8m	3
M/W LINK	0.6m	26.4m	4
M/W LINK			
M/W LINK			

11. EXISTING LAYOUT(S):

GENERAL VIEW OF STRUCTURE



RADIO INFORMATION



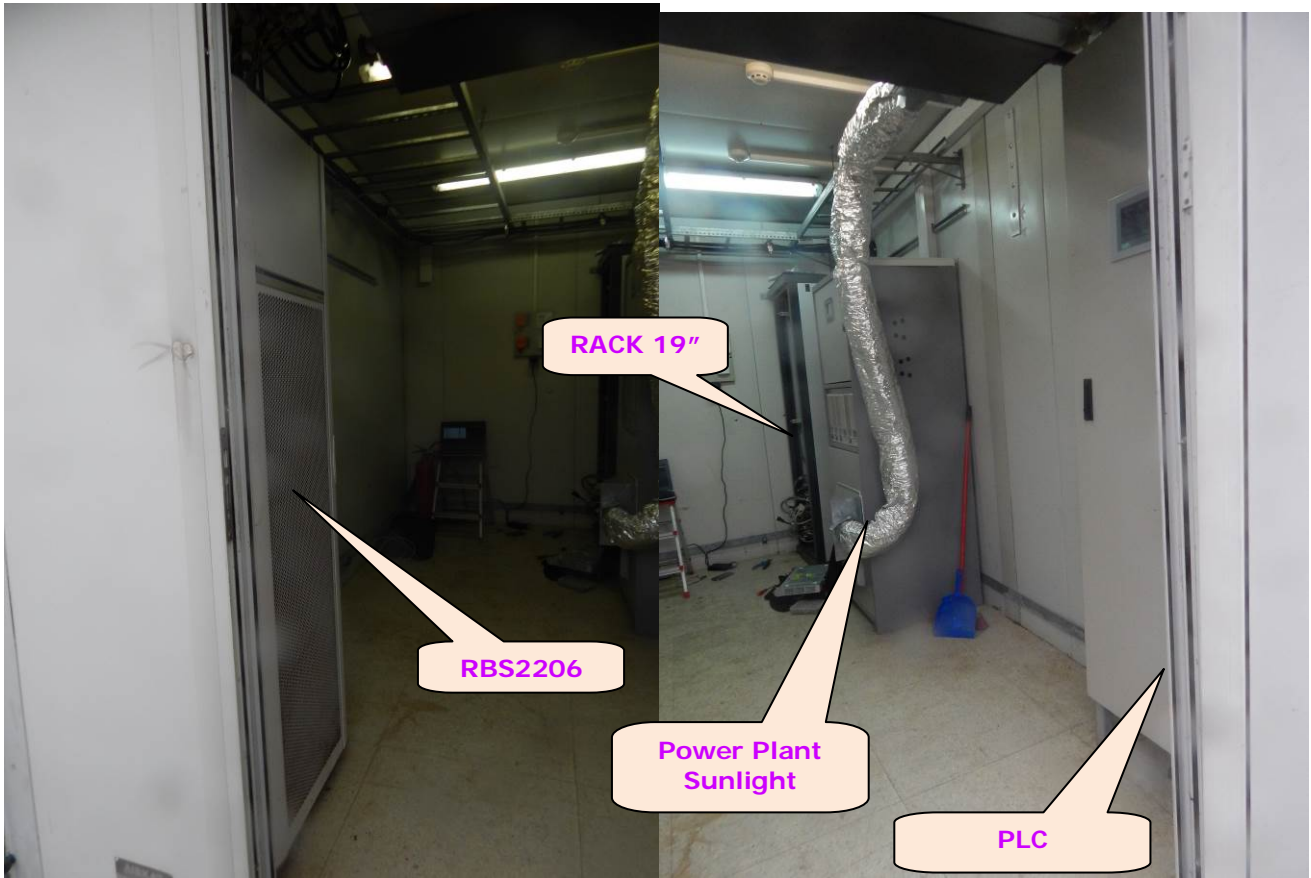






Modernization Telekom Mobile





Shelter echipamente





Rack 19"



Power Plant Sunlight



AC



RBS2206





PLC



TRASEE CABLURI SHELTER

CW INFORMATION



SECTOR 1



SECTOR 2



Sector 3

12. PROPOSED INFRASTRUCTURE & EQUIPMENT SOLUTION

a. Indoor cabinets

Dimensions of existing room:	3x2.4m
Space availability for indoor equipment:	YES
Expansion of existing equipment room:	NO
Shelter needed:	NO
Shelter concrete base needed:	NO
Space availability for new shelter positioning:	N/A
AC power extension/change:	NO
Main grounding bus bar existence:	YES
Water proofing of the room needs restoration:	NO
Internal Lighting restoration:	NO
Wall painting needed:	NO
Antistatic floor addition:	NO
Fire alarm system expansion:	NO
Air Conditioning (A/C) expansion/replacement:	NO
Nr./capacity[A] of rectifier modules	4x50A
Security Lights board:	NO
Plastic trays for cables expansion :	NO
Internal ladder for the feeders availability:	YES
Cable entry expansion:	NO
Other Remarks:	-

b. Outdoor cabinets

New metal base needed:	N/A
Dimensions of new metal base:	N/A
Secure of metal base on floor:	N/A
Grounding of base/Earthing for equipments:	N/A



AC power supply availability:	N/A
Needed properly holes on base:	N/A
Clearances around cabinets:	N/A
Other Remarks:	-

c. Proposed New Masts

	Height	Length	poles/mast	Cell_id on the mast	Position
1					
2					
3					
4					

d. New Antenna Poles

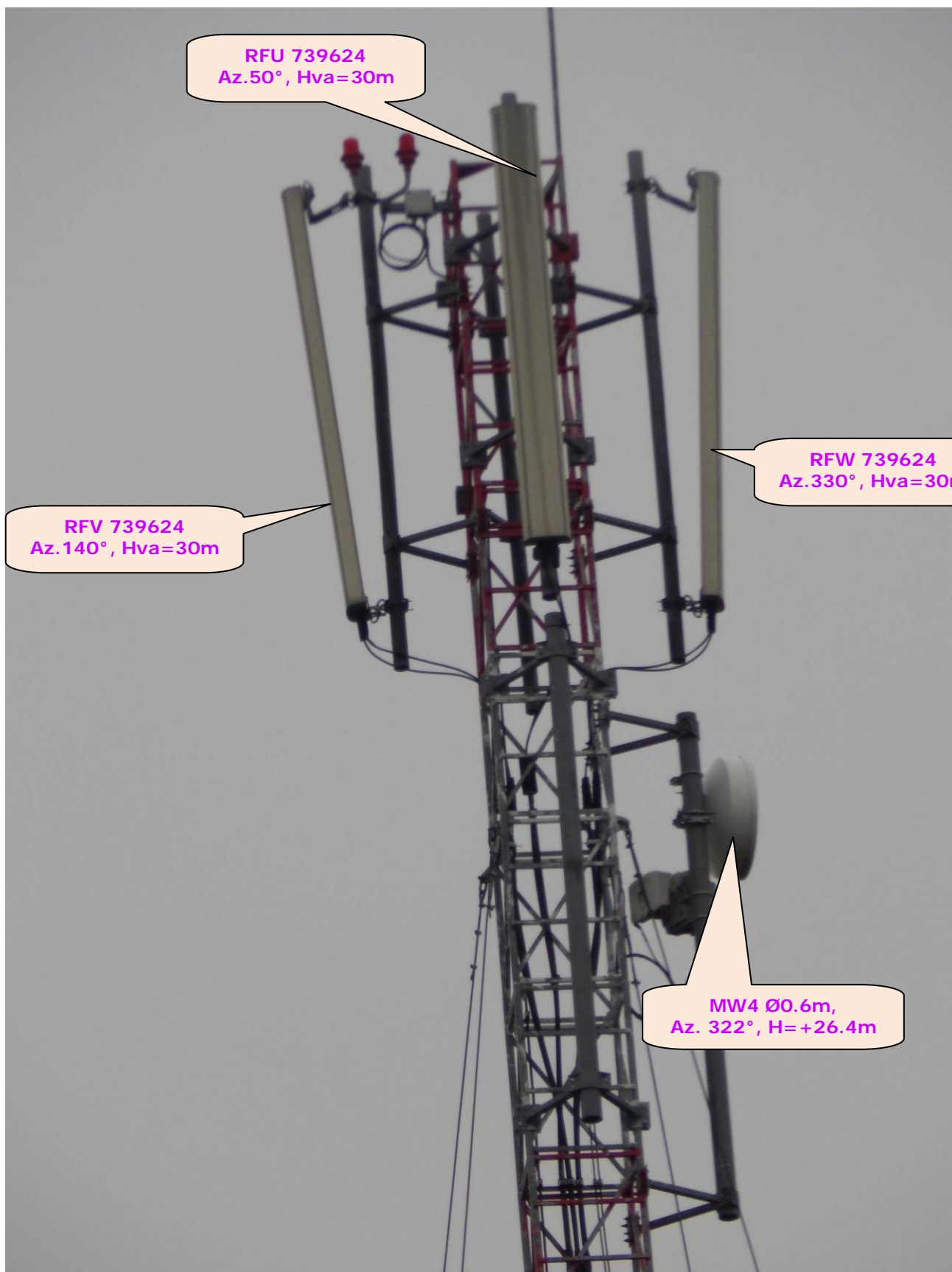
	Height	Length	Cell_id	Corner/Tower	Obstacles	installation readiness
1						
2						
3						
4						

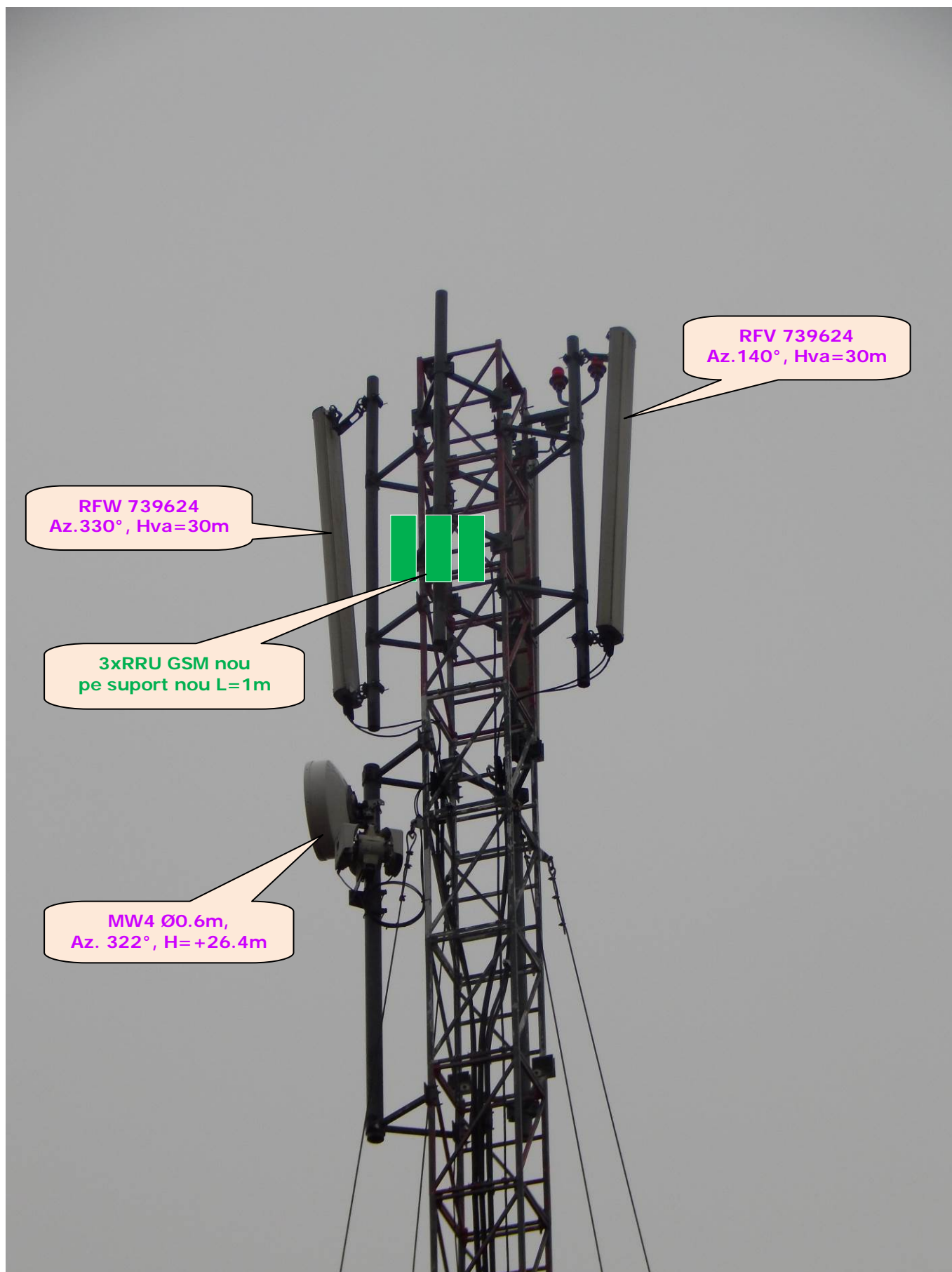
e. New MW Poles

	Height	Length	Hop id	Corner/Tower	Far end	Obstacles	installation readiness
1							
2							
3							

Proposed corrective works:	<p>Obiectul prezentului proiect il constituie: Reconfigurarea site-ului CJ294 Cucerdea_X care sa includa urmatoarele elemente:</p> <ul style="list-style-type: none"> - antenele RF existente (3x739624) se pastreaza; - pe suportul offset existent se vor instala 3 RRU-uri GSM noi; - impamantarile RRU-urilor se vor lega la impamantare existenta cu conductor FY 16mm - in rack 19" existent se va instala un RBS 6601GWL cu 1xDUG, un SAU nou si un PDU nou; - PDU nou se va alimenta din doua sig. 63A existente in power plant Sunlight cu patru cabluri noi Cu(1x25mm²) L=6m; - PDU-ul se va lega la centura impamantare shelter cu conductor FY 16mm; - RBS 6601 nou se va alimenta din sigurante 16A existenta in PDU nou; - in PDU nou se vor inlocui 3 sig. 16A cu 3 sig. 25A noi din care se vor alimenta RRU-urile GSM noi; - pe traseul de cabluri existent se vor instala 3xFO+3xDC; <p>Lungimi cabluri:</p> <ul style="list-style-type: none"> - jumperi 1/2" - 6 buc. x 3m; - FO - 3 buc. x 50m; - DC Cu 2x10mm - 3 buc. x 50m; <ul style="list-style-type: none"> - protectia metalica a cablului de alimentare a RRU-urilor se va lega la ground-bar-ul specific existent in PDU; - dupa SW-AP echipamentele RBS 2206 se vor dezinstala impreuna cu feederii aferenti; <p>* Structurile metalice si echipamentele noi se vor conecta la impamantarea existenta pe site.</p>
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13. PROPOSED SOLUTION LAYOUT(S): PICTURES AND COMMENTS:







Rack 19"

14. Detailed site information/Picture:

- o Pictures with Metallic existing structure; further reuse to be acknowledge by Telekom;





- o Pictures with existing Cable tray to decide if additional feeders can be added/ if case

