



PROYECTO FINAL DE CARRERA
VIVIENDA UNIFAMILIAR GOLMAYO, SORIA

Andrea Penadés Ortolá

Tutores: Milagros Iborra / Frantisek Kulhanek

Junio 2011

ÍNDICE

- Objetivos del proyecto
- Localización
- Datos previos
- Condiciones arquitectónicas del proyecto
- Alzados
- Secciones
- Planos de cotas
- Cimentación y estructura
- Instalaciones
- Carpintería
- Seguridad y salud



A decorative vertical bar on the left side of the slide, consisting of several vertical lines of varying thickness and shades of gray. To the right of these lines are several circles of different sizes, also in shades of gray, arranged in a vertical sequence. The word "OBJETIVOS" is written in a light gray, sans-serif font to the right of the circles.

OBJETIVOS

OBJETIVOS

- El objetivo del presente proyecto es realizar una vivienda unifamiliar en la urbanización 'Las camaretas', perteneciente al municipio de Golmayo, en la provincia de Soria.
- Las pautas a seguir en la realización de este proyecto se han establecido por el tutor de la universidad de destino České vysoké učení technické v Praze (Universidad técnica de Praga)



OBJETIVOS

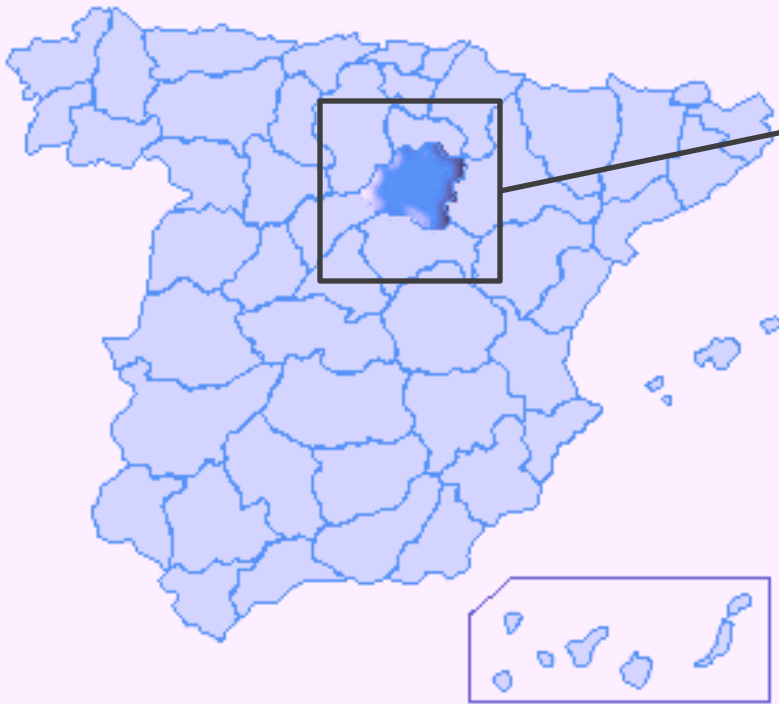
- Se va a estudiar de forma estimada la cimentación escogida, la estructura y las instalaciones tanto de electricidad, agua caliente, agua fría y bajantes residuales.
- Se desarrollan planos de cotas de todas las plantas y secciones al igual que la realización de secciones y detalles constructivos de puntos singulares
- Se realizan los planos de seguridad y salud gráficamente



A decorative vertical bar on the left side of the slide, consisting of several vertical lines of varying thickness and shades of gray, and a series of circles of different sizes arranged vertically. The word "LOCALIZACIÓN" is written in a light gray, sans-serif font to the right of the circles.

LOCALIZACIÓN

LOCALIZACIÓN





Parcela a construir:
Área municipal de Golmayo, provincia Soria
Urbanización 'Las Camaretas'
Parcelas nº 3 y nº4
Sup parcela: 1024 m²

A decorative vertical bar on the left side of the slide, consisting of a thick grey bar and several thin white vertical lines. To the right of these lines are five grey circles of varying sizes, arranged in a vertical line that tapers towards the bottom.

DATOS PREVIOS

DIMENSIONES

- La parcela tiene una superficie de 1024 m^2 .
- Dimensiones del perímetro:
 - Linde principal: 30,09m
 - Linde sur: 36,04m
 - Linde norte: 32,5m
 - Linde oeste: 29,88m



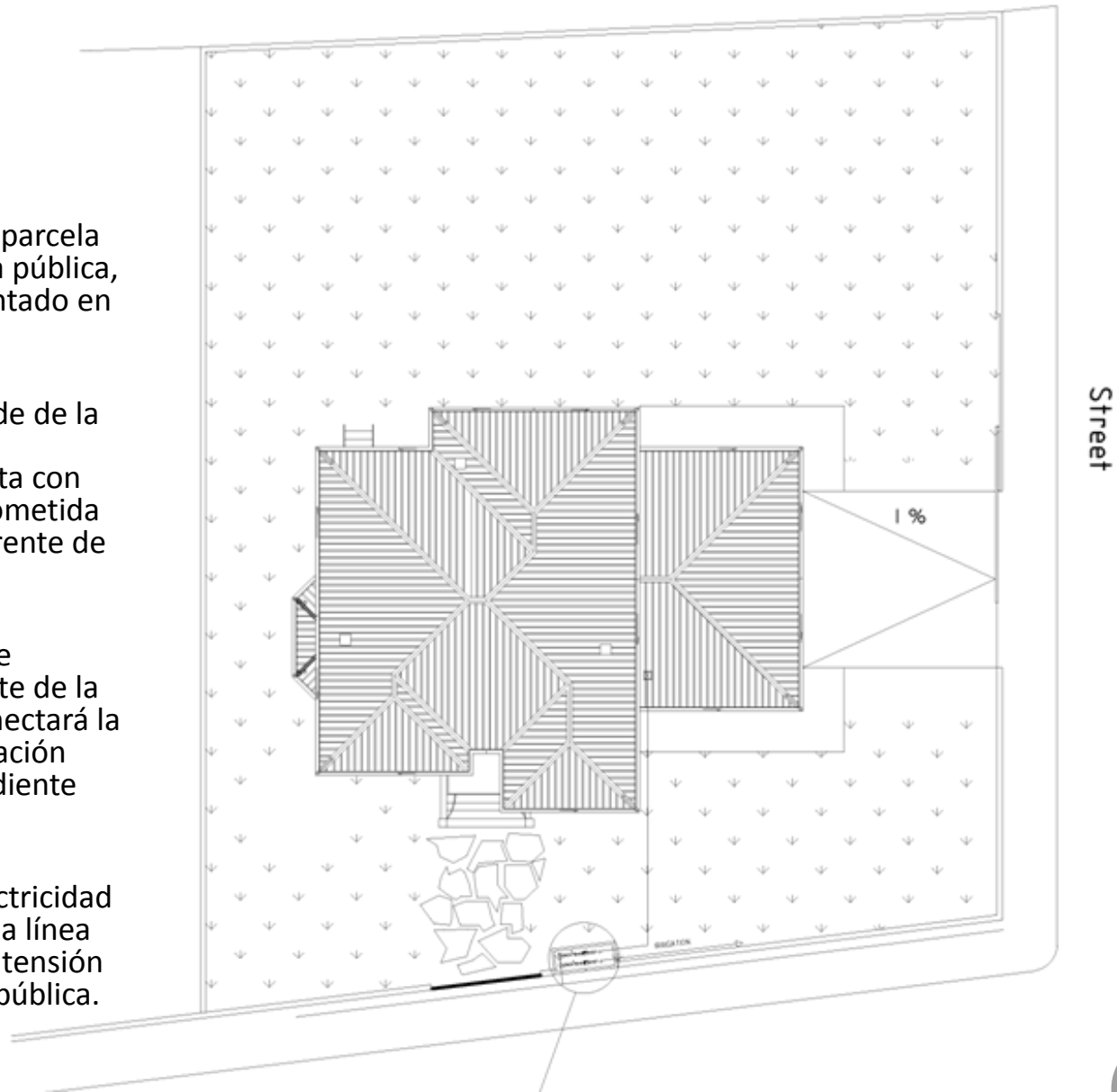
NORMATIVA URBANA

- Clasificación del suelo: Suelo no consolidado
- Clasificación zona: Zona urbana
- Parcela:
 - Altura máxima construida: 2 pisos con altura máxima de 7 metros
 - Área mínima: 500 m²
 - Máxima profundidad edificable: No especificada
 - Máxima parcela: No aplicable



LA PARCELA

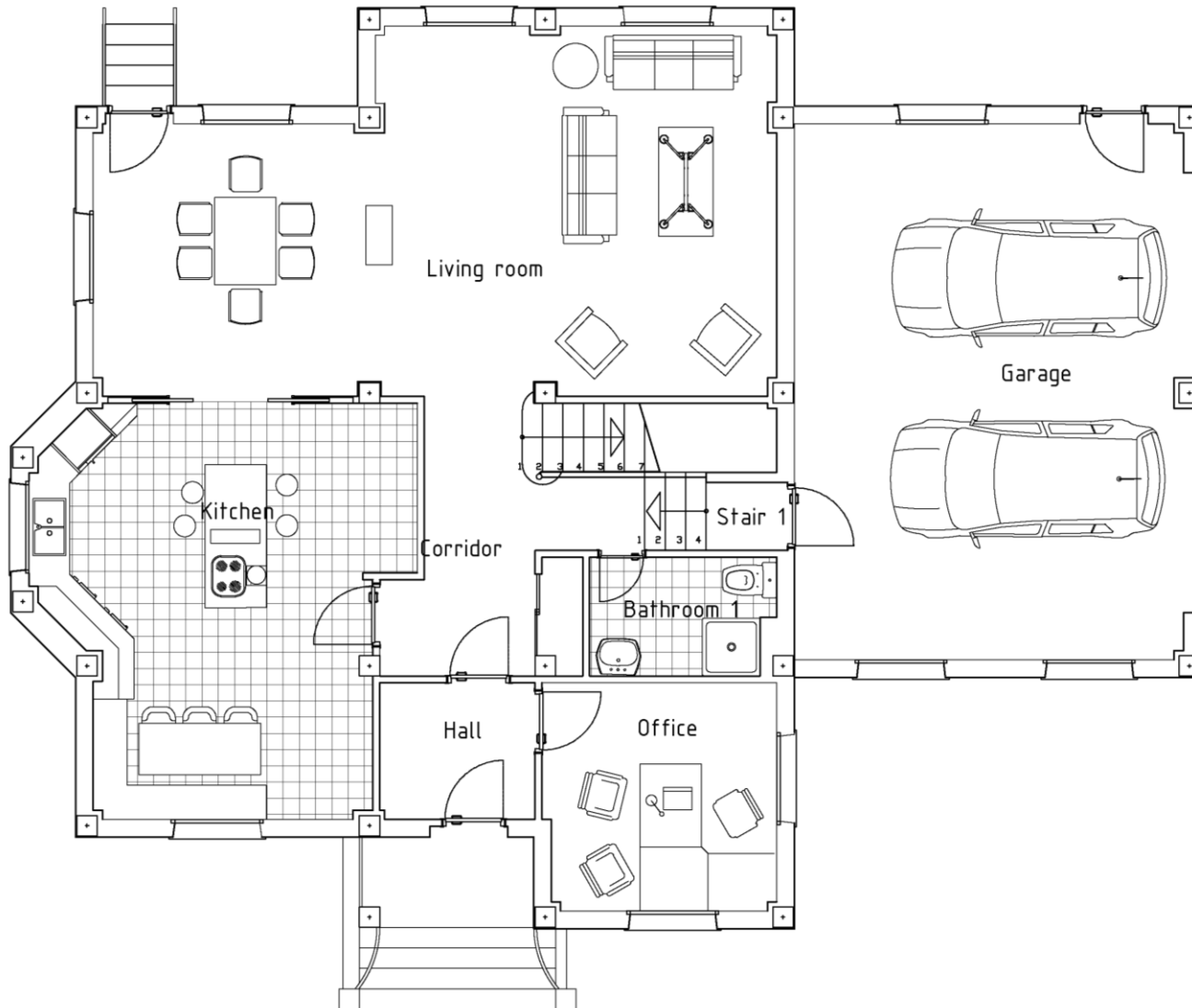
- El acceso previsto a la parcela se realiza desde una vía pública, y se encuentra pavimentado en su totalidad.
- El agua potable procede de la red municipal de abastecimiento, y cuenta con canalización para la acometida prevista situada en el frente de la parcela o solar.
- Existe red municipal de saneamiento en el frente de la parcela, a la cual se conectará la red interior de la edificación mediante la correspondiente acometida.
- El suministro de la electricidad se realizará a partir de la línea de distribución en baja tensión que discurre por la vía pública.



A vertical decorative bar on the left side of the slide, consisting of several thin white lines and a larger grey bar. To the right of the grey bar are several grey circles of varying sizes, arranged in a descending staircase pattern from top to bottom.

CONDICIONES ARQUITECTÓNICAS

PLANTA BAJA



PLANTA BAJA

Floor	Room	Useful	Built
Basement floor	Hall	5,58 m ²	
	Corridor	7,62 m ²	
	Kitchen	28,85 m ²	
	Living room	48,31 m ²	
	Bathroom 1	4,70 m ²	
	Office	11,22 m ²	
	Stair 1	4,11 m ²	
	Garage	46,40 m ²	
Total		156,79 m ²	188,15 m ²

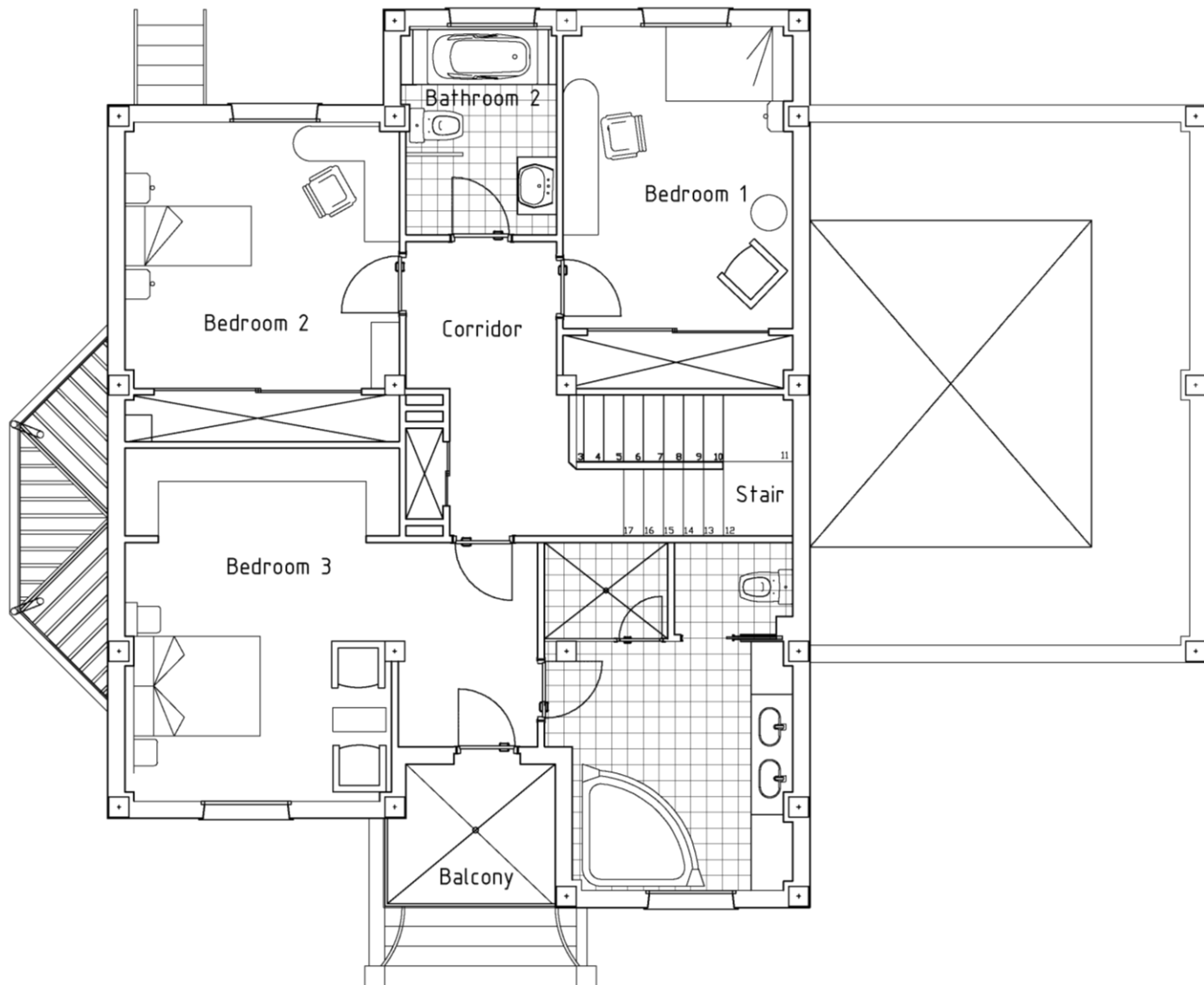
En la Planta Baja se encuentra la zona de día. Consta de un hall en la entrada principal, una oficina de trabajo, cocina, salón-comedor, garaje con acceso a la vivienda y unas escaleras de acceso a la planta superior. También hay un baño completo.



PLANTA BAJA



PLANTA PRIMERA



PLANTA PRIMERA

Floor	Room	Useful	Built
First floor	Stair	7,32 m ²	
	Corridor	8,77 m ²	
	Bedroom 1	15,56 m ²	
	Bedroom 2	16,39 m ²	
	Bathroom 2	7,12 m ²	
	Bedroom 3	27,48 m ²	
	Bathroom 3	18,02 m ²	
	Balcony	2,65 m ²	
Total		103,31 m ²	123,97 m ²

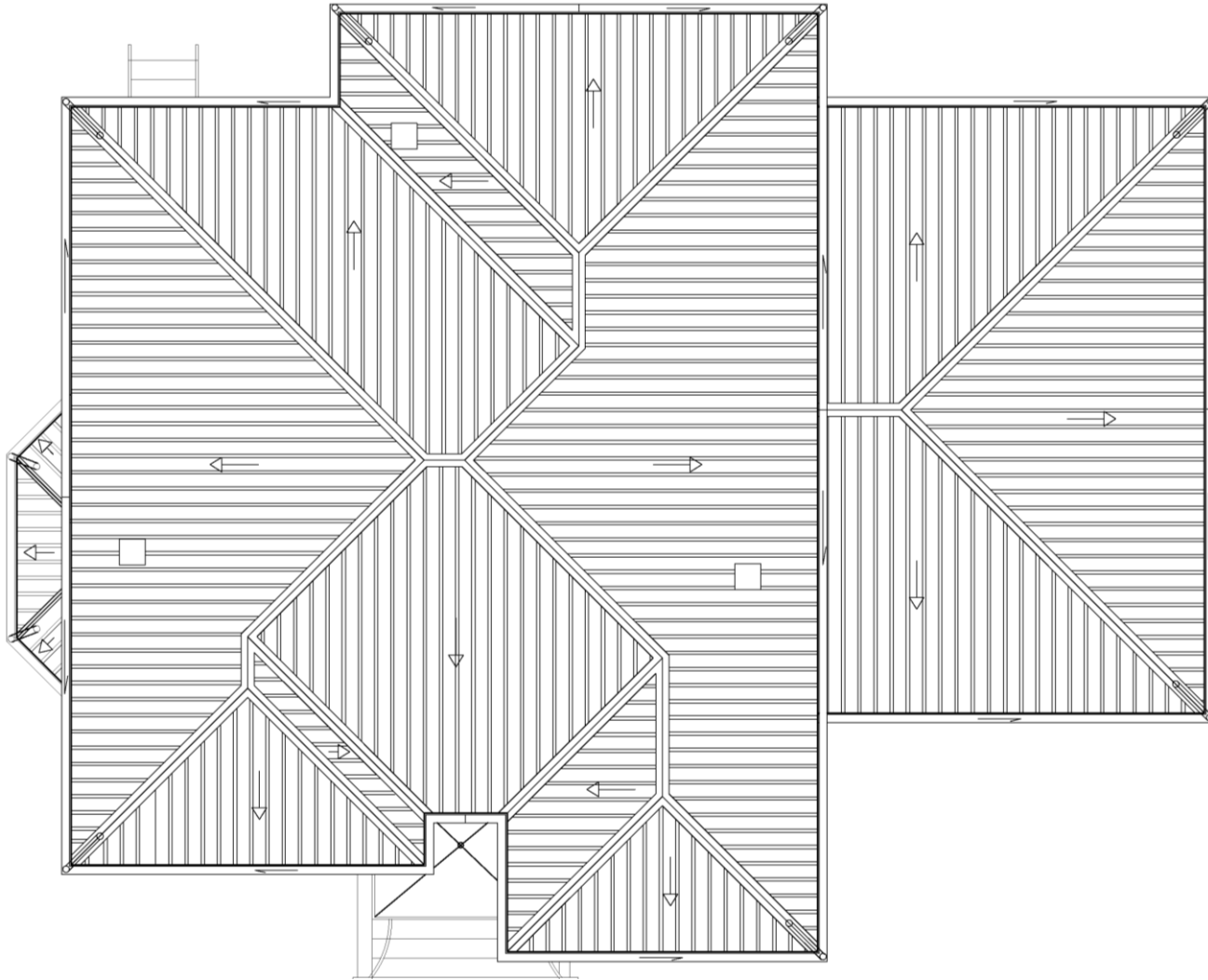
En la Planta Primera se encuentra la zona de noche. Consta de 3 dormitorios; el dormitorio principal tiene en su interior un baño completo , y una terraza que recae en la fachada principal de la casa. Las otras 2 habitaciones comparten otro baño completo.



PLANTA PRIMERA

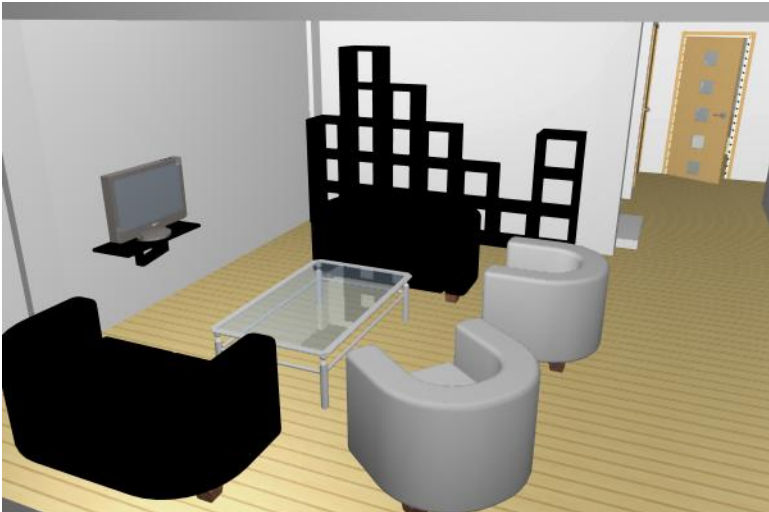


CUBIERTA





Salón-comedor



Cocina

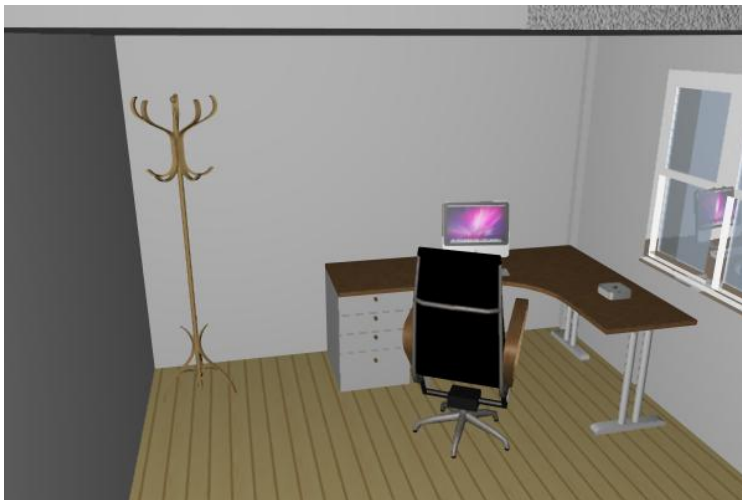




Baño



Escaleras



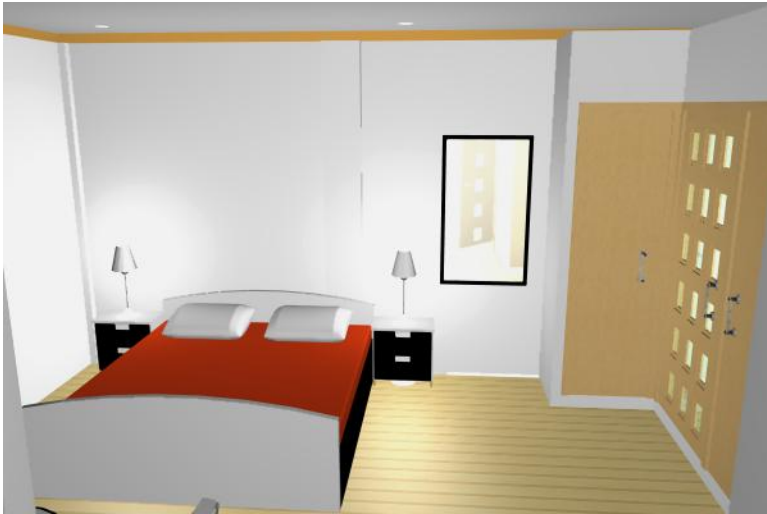
Oficina



Garaje



Dormitorio principal



Dormitorio 2



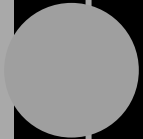
Dormitorio 3



Baño




ALZADOS



ALZADO ESTE




PROJECT: SINGLE FAMILY HOUSE		 CVUT	
LOCATION: GOLMAYO, SORIA, SPAIN			
AUTHOR: ANDREA PENADÉS ORTOLÁ			
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE: 1:75	PLAN NAME: ELEVATION PLAN: EAST	Nº PLANE: 6	DATE: JUNE 2011

ALZADO ESTE



ALZADO OESTE




PROJECT: SINGLE FAMILY HOUSE		 CVUT	
LOCATION: GOLMAYO, SORIA, SPAIN			
AUTHOR: ANDREA PENADÉS ORTOLÁ			
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE: 1:75	PLAN NAME: ELEVATION PLAN: WEST	Nº PLANE: 7	DATE: JUNE 2011

ALZADO OESTE



ALZADO NORTE

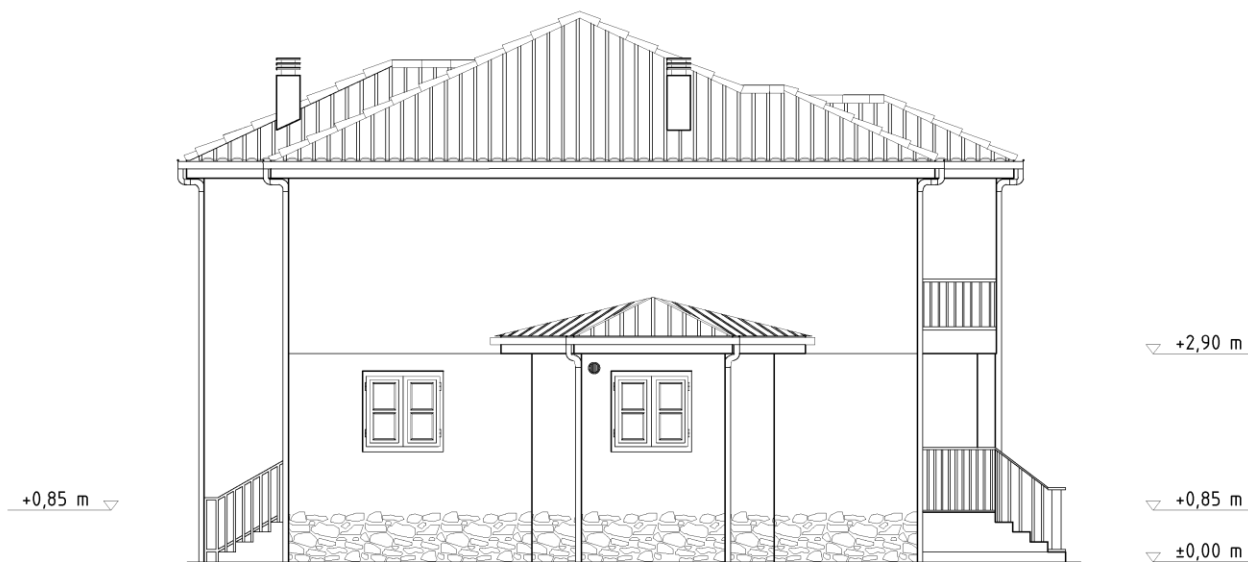


PROJECT: SINGLE FAMILY HOUSE		 CVUT	
LOCATION: GOLMAYO, SORIA, SPAIN			
AUTHOR: ANDREA PENADÉS ORTOLÁ			
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE: 1:75	PLAN NAME: ELEVATION PLAN: NORTH	Nº PLANE: 8	DATE: JUNE 2011

ALZADO NORTE



ALZADO SUR



PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	ELEVATION PLAN: SOUTH	9	JUNE 2011



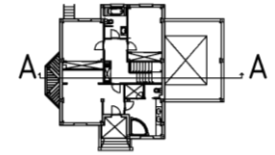
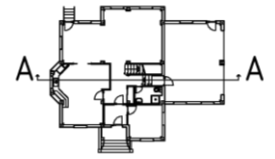
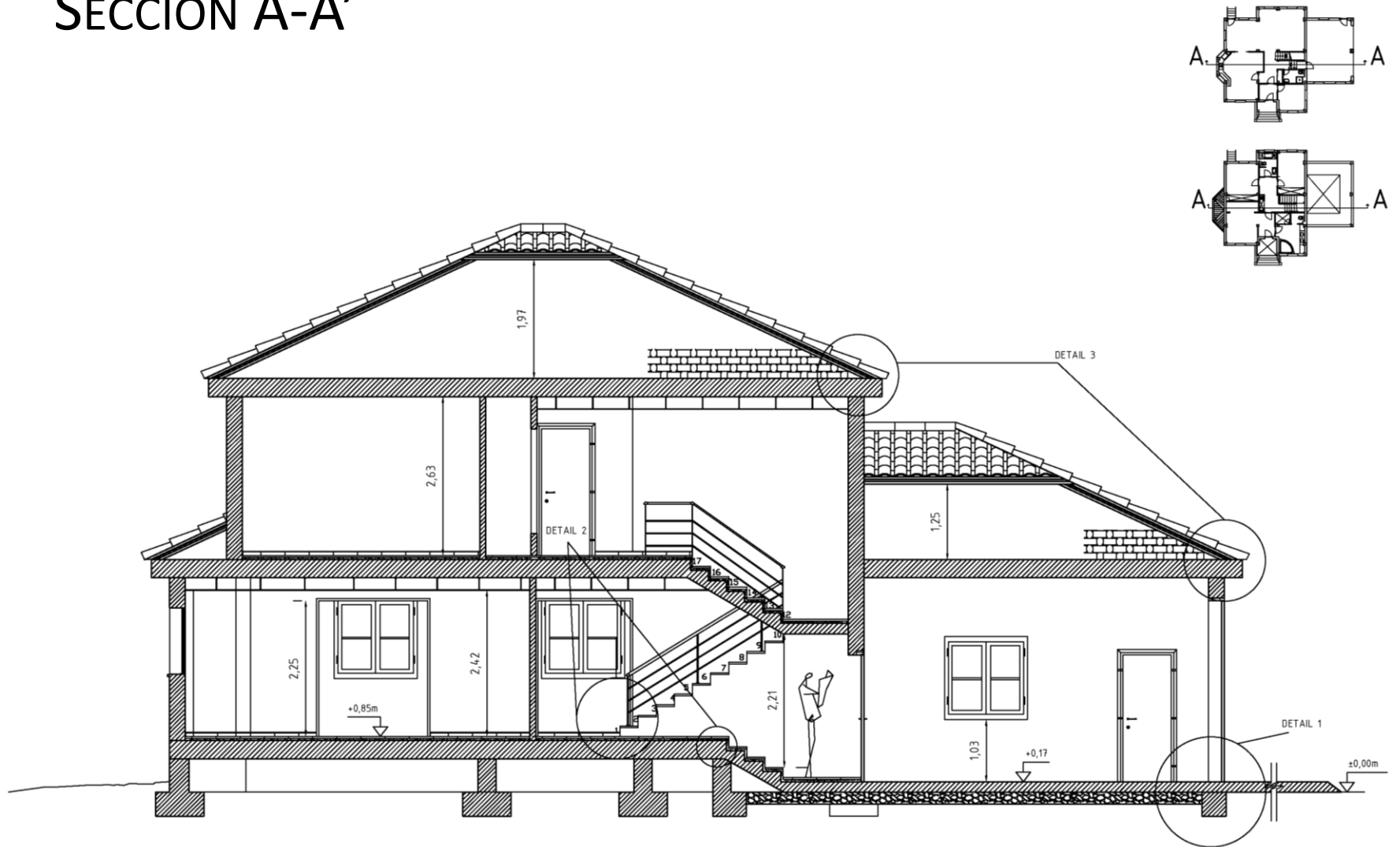
ALZADO SUR





SECCIONES Y DETALLES

SECCIÓN A-A'

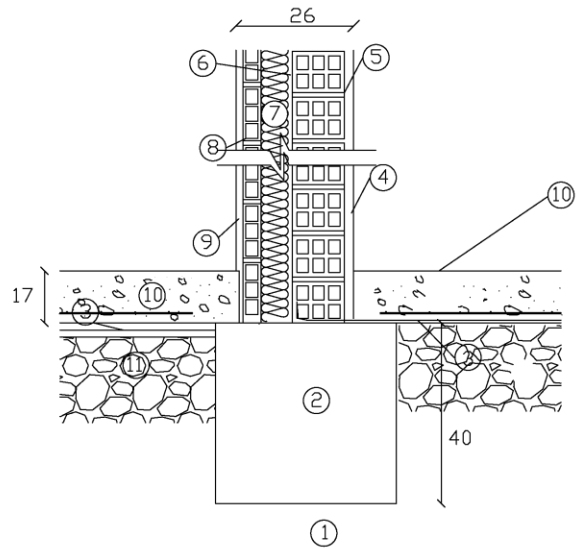


SECTION A-A'



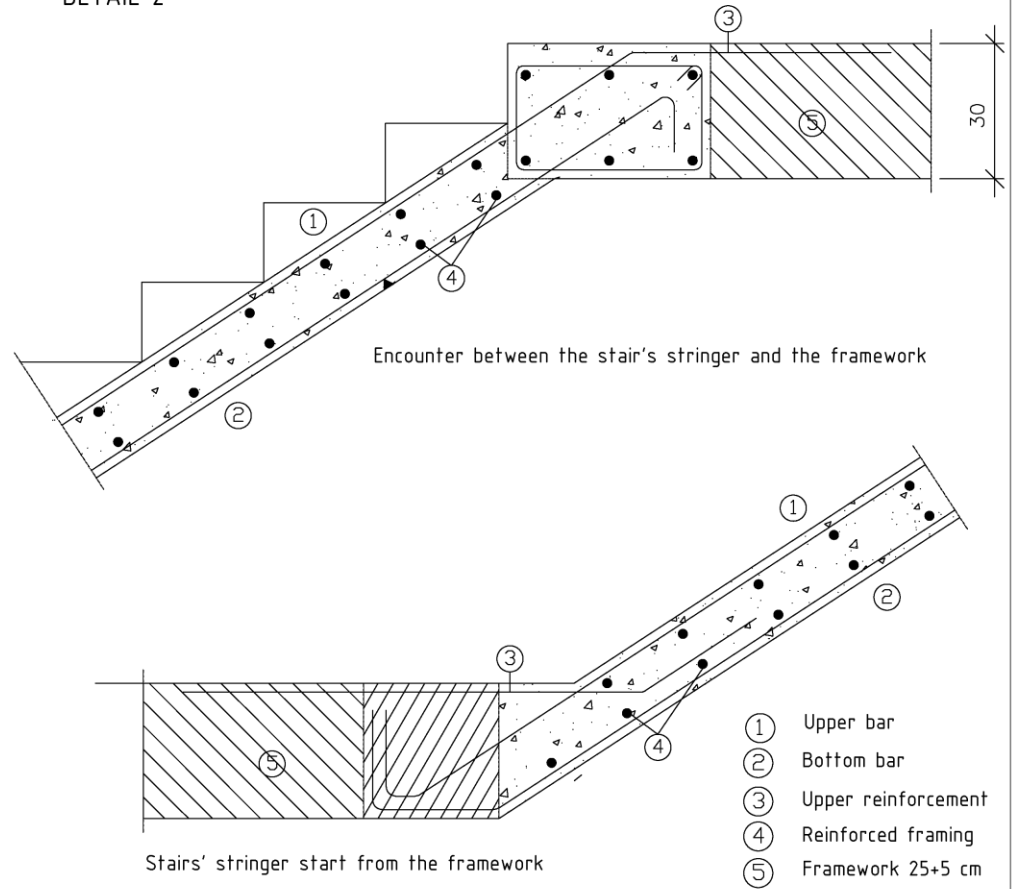
SECCIÓN A-A'

DETAIL 1



- ① Lot
- ② Viga riostra de cimentación
- ③ Bituminous waterproofing
- ④ Mortar 2cm
- ⑤ Double air brick 1.5x24x9
- ⑥ Interior parge coat 1cm
- ⑦ Thermal insulation (polystyrene) 6cm
- ⑧ Simple air brick 4cm
- ⑨ Plaster parge coat 1.5cm
- ⑩ Sill plate 17cm
- ⑪ Irregular stones 20cm

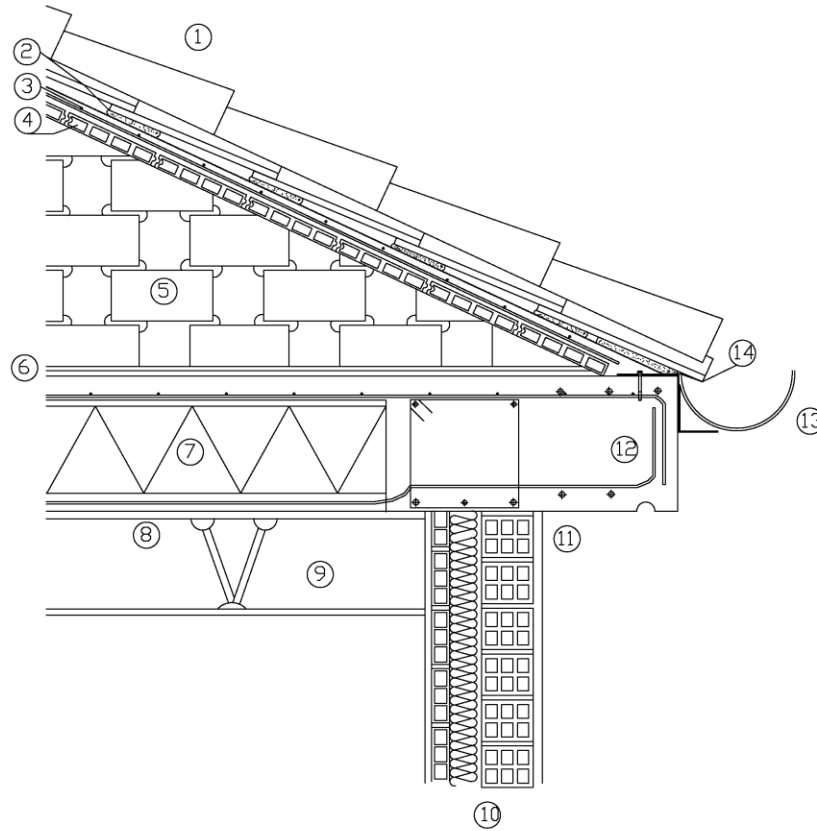
DETAIL 2





PROJECT: SINGLE FAMILY HOUSE			
LOCATION: GOLMAYO, SORIA, SPAIN			
AUTHOR: ANDREA PENADÉS ORTOLÁ			
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE: 1:10	PLAN NAME: DETAIL 1-2	Nº PLANE: 11	DATE: JUNE 2011

SECCIÓN A-A'

DETAIL 3



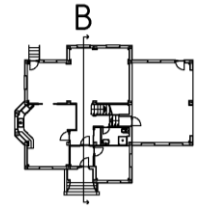
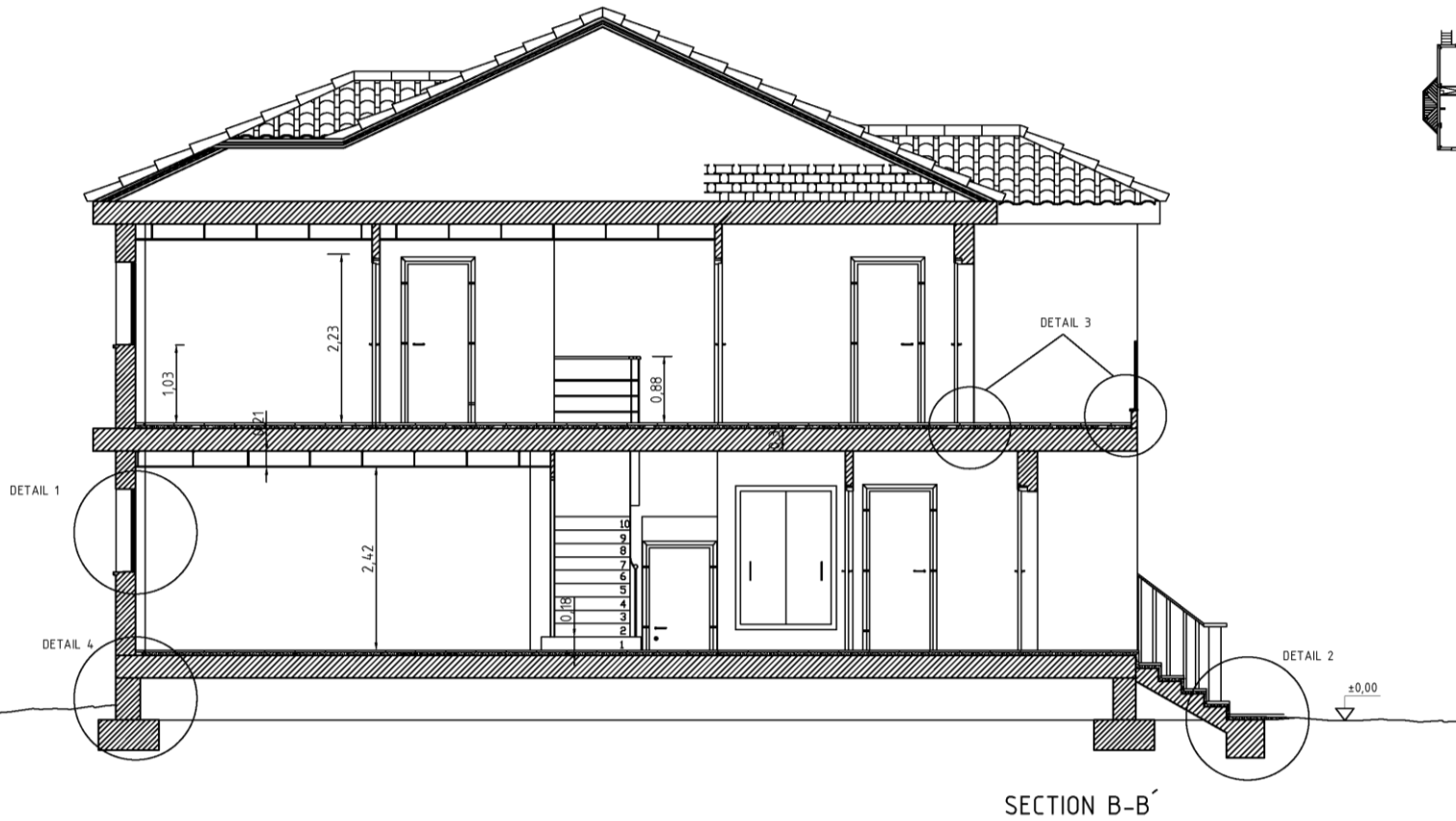
- ① Ceramic tile
- ② Cement temper
- ③ Welded-wire mesh
- ④ Grand
- ⑤ Air brick partition
- ⑥ Polystyrene thermal insulation
- ⑦ Framework 25+5 cm
- ⑧ Plaster parge coat 2cm
- ⑨ Drop ceiling made from plaster sheet 20cm
- ⑩ Enclosure parge coat
- ⑪ Overhang framework 30 cm
- ⑫ Reinforced solid slab :
-Upper $\sigma 10$ c/15
-Bottom $\sigma 10$ c/15
- ⑬ Hanging gutter
- ⑭ Waterproofing

PROJECT: SINGLE FAMILY HOUSE		
LOCATION: GOLMAYO, SORIA, SPAIN		
AUTHOR: ANDREA PENADÉS ORTOLÁ		
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE: 1:10	PLAN NAME: DETAIL 3	DATE: JUNE 2011
		Nº PLANE: 12

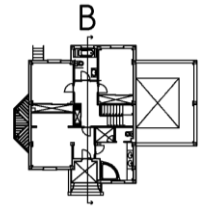
SECCIÓN A-A'



SECCIÓN B-B'



B



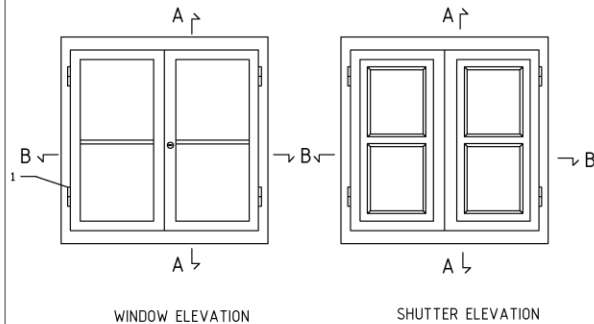
B



SECCIÓN B-B'

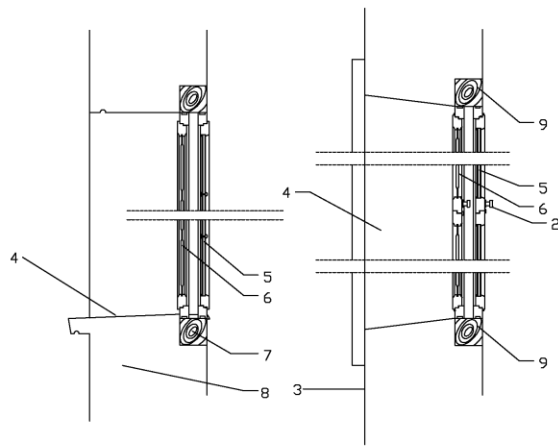
DETAIL 1

DETAIL 2



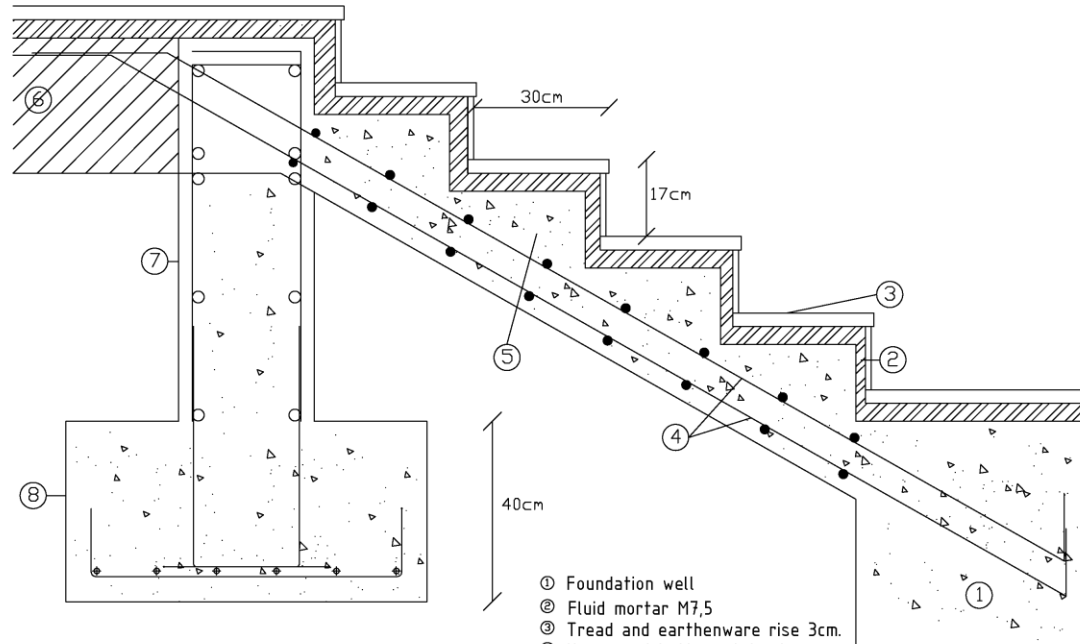
WINDOW ELEVATION

SHUTTER ELEVATION



SECTION A-A

SECTION B-B



- ① Foundation well
- ② Fluid mortar M7,5
- ③ Tread and earthenware rise 3cm.
- ④ Upper and bottom stairs bar.
- ⑤ Concrete HA-25
- ⑥ Framework 25x5
- ⑦ Foundation wall
- ⑧ Continuous footing

- ① Hanging brass hinge 80 cm.
- ② Bolt
- ③ Parge coat T= 2cm
- ④ Cladding chestnut board t= 2.2 cm.
- ⑤ Chestnut woodwork with double glass tips
- ⑥ Chestnut wood shutter
- ⑦ Chestnut wood sill 15x15 cm.
- ⑧ Parge coat facade
- ⑨ Chestnut wood jamb 10x10 cm.

The window is composed of a mixed window, with chestnut wood in the interior leaf and aluminium in the exterior part. The shutter is totally made from chestnut wood.

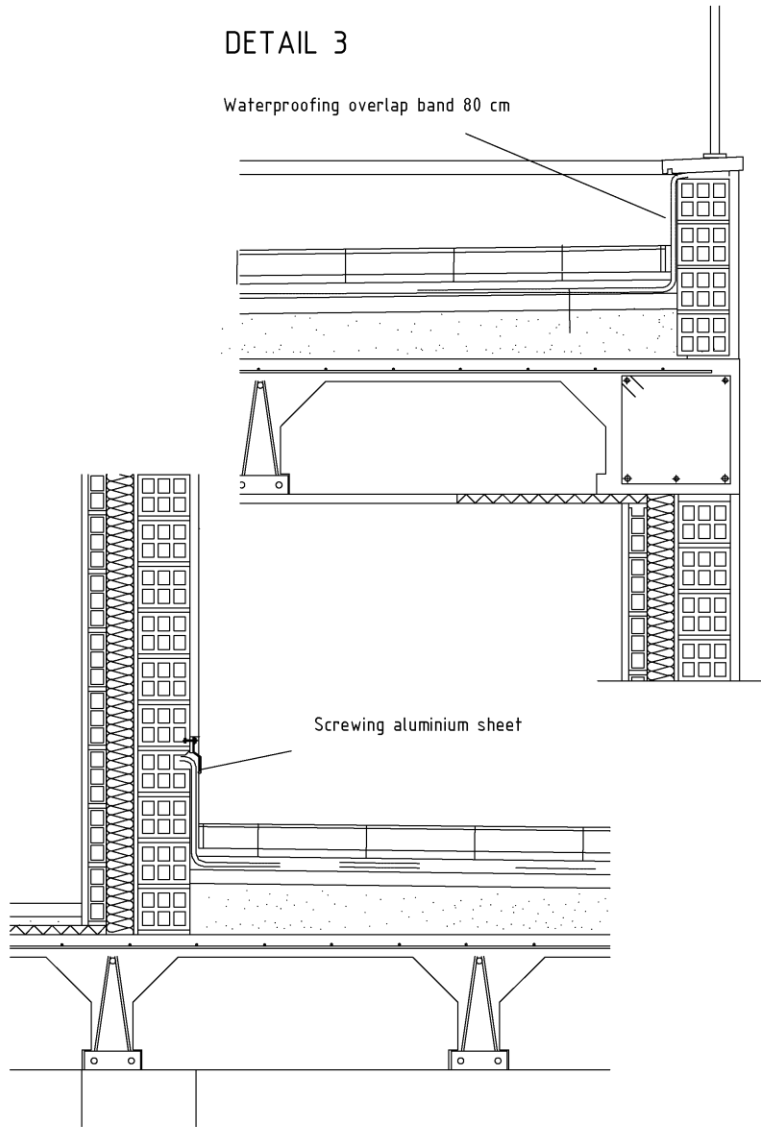
PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:10	DETAIL 1-2	14	JUNE 2011



SECCIÓN B-B'

DETAIL 3

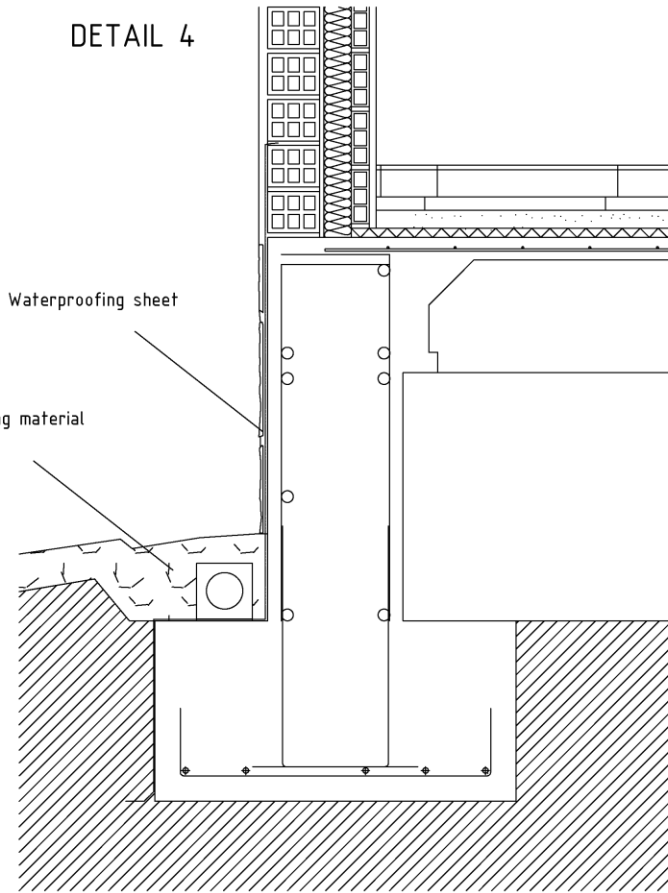
Waterproofing overlap band 80 cm



DETAIL 4

Waterproofing sheet

Filtering material



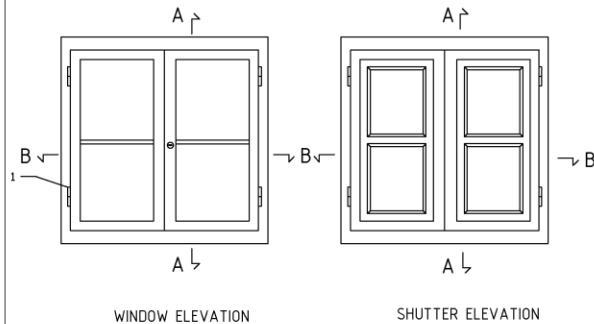
PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:10	DETAIL 3-4	15	JUNE 2011



SECCIÓN B-B'

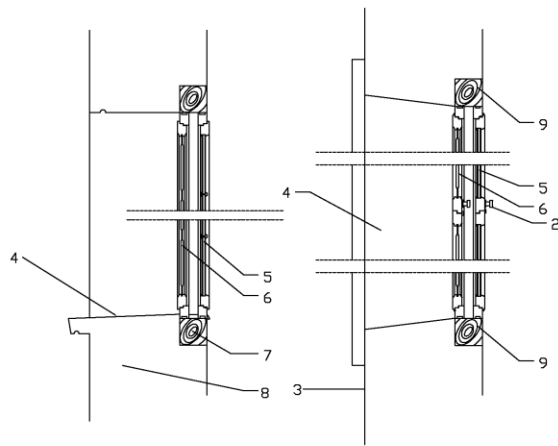
DETAIL 1

DETAIL 2



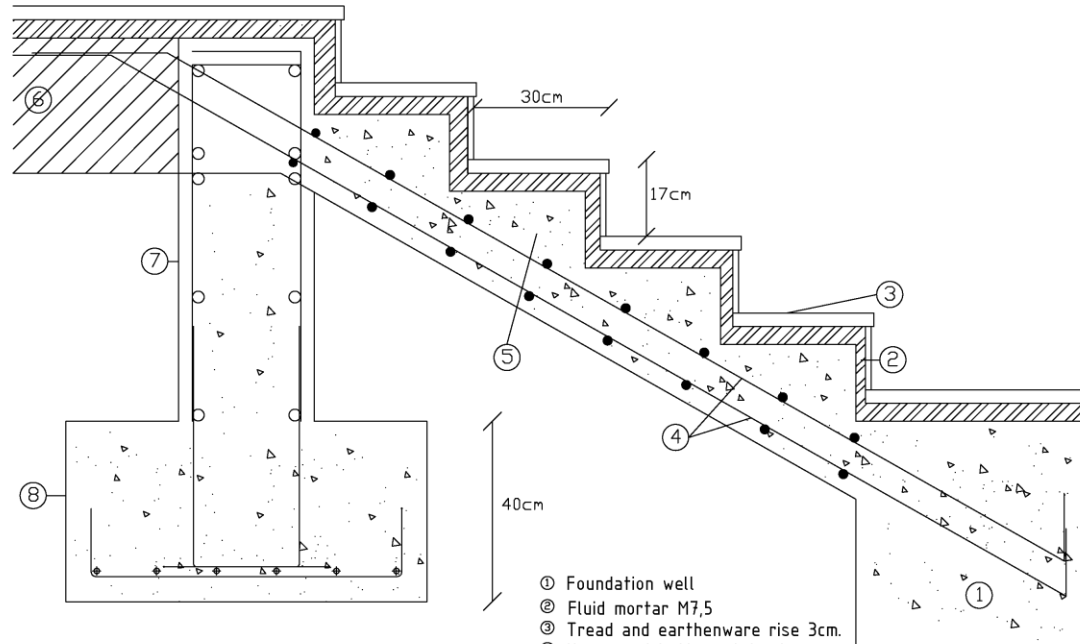
WINDOW ELEVATION

SHUTTER ELEVATION



SECTION A-A



SECTION B-B



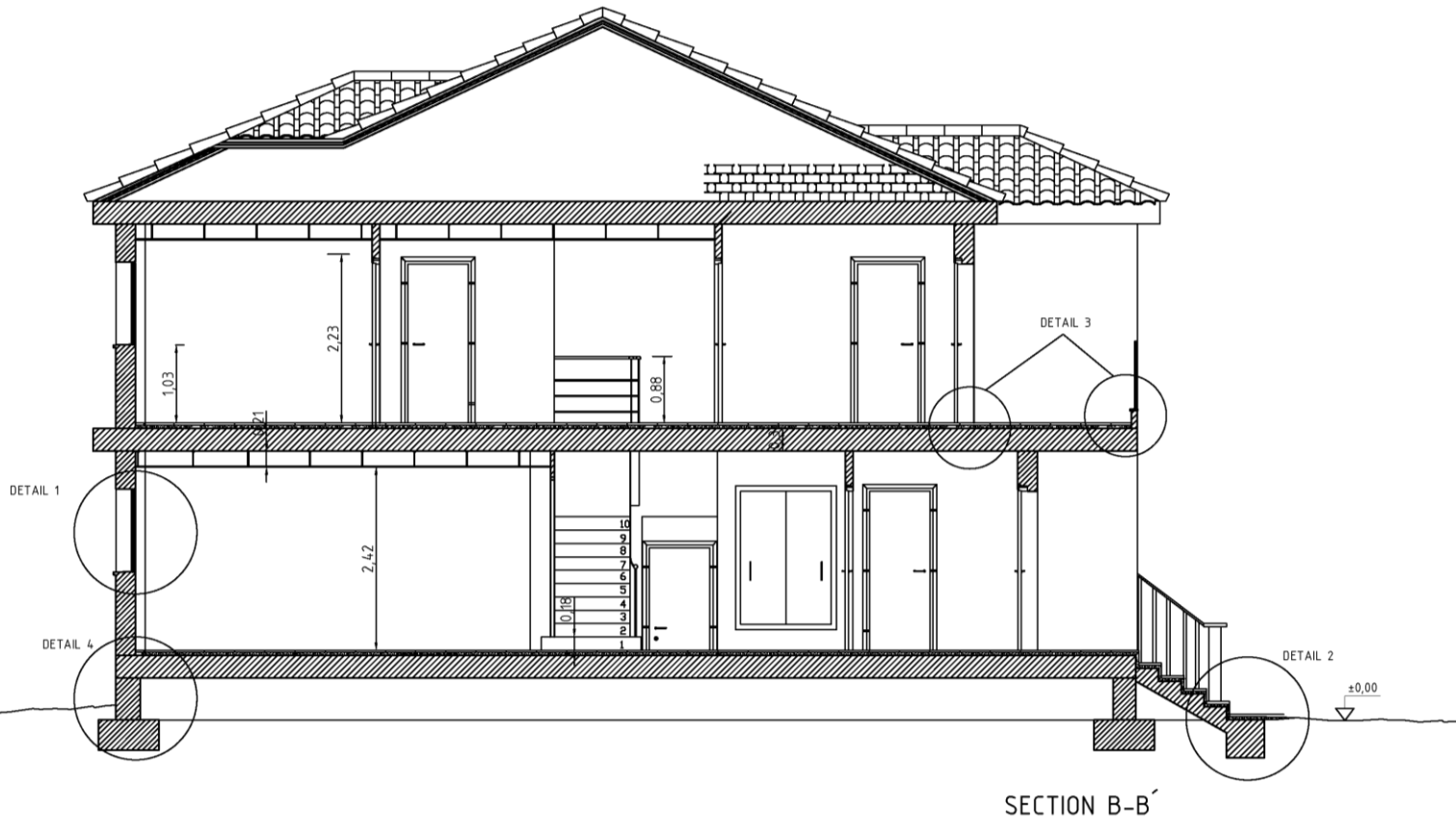
- ① Foundation well
- ② Fluid mortar M7,5
- ③ Tread and earthenware rise 3cm.
- ④ Upper and bottom stairs bar.
- ⑤ Concrete HA-25
- ⑥ Framework 25x5
- ⑦ Foundation wall
- ⑧ Continuous footing

- ① Hanging brass hinge 80 cm.
- ② Bolt
- ③ Parge coat T= 2cm
- ④ Cladding chestnut board t= 2.2 cm.
- ⑤ Chestnut woodwork with double glass tips
- ⑥ Chestnut wood shutter
- ⑦ Chestnut wood sill 15x15 cm.
- ⑧ Parge coat facade
- ⑨ Chestnut wood jamb 10x10 cm.

The window is composed of a mixed window, with chestnut wood in the interior leaf and aluminium in the exterior part. The shutter is totally made from chestnut wood.

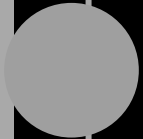
PROJECT: SINGLE FAMILY HOUSE		
LOCATION: GOLMAYO, SORIA, SPAIN		
AUTHOR: ANDREA PENADÉS ORTOLÁ		
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE: 1:10	PLAN NAME: DETAIL 1-2	Nº PLANE: 14
		DATE: JUNE 2011

SECCIÓN B-B'



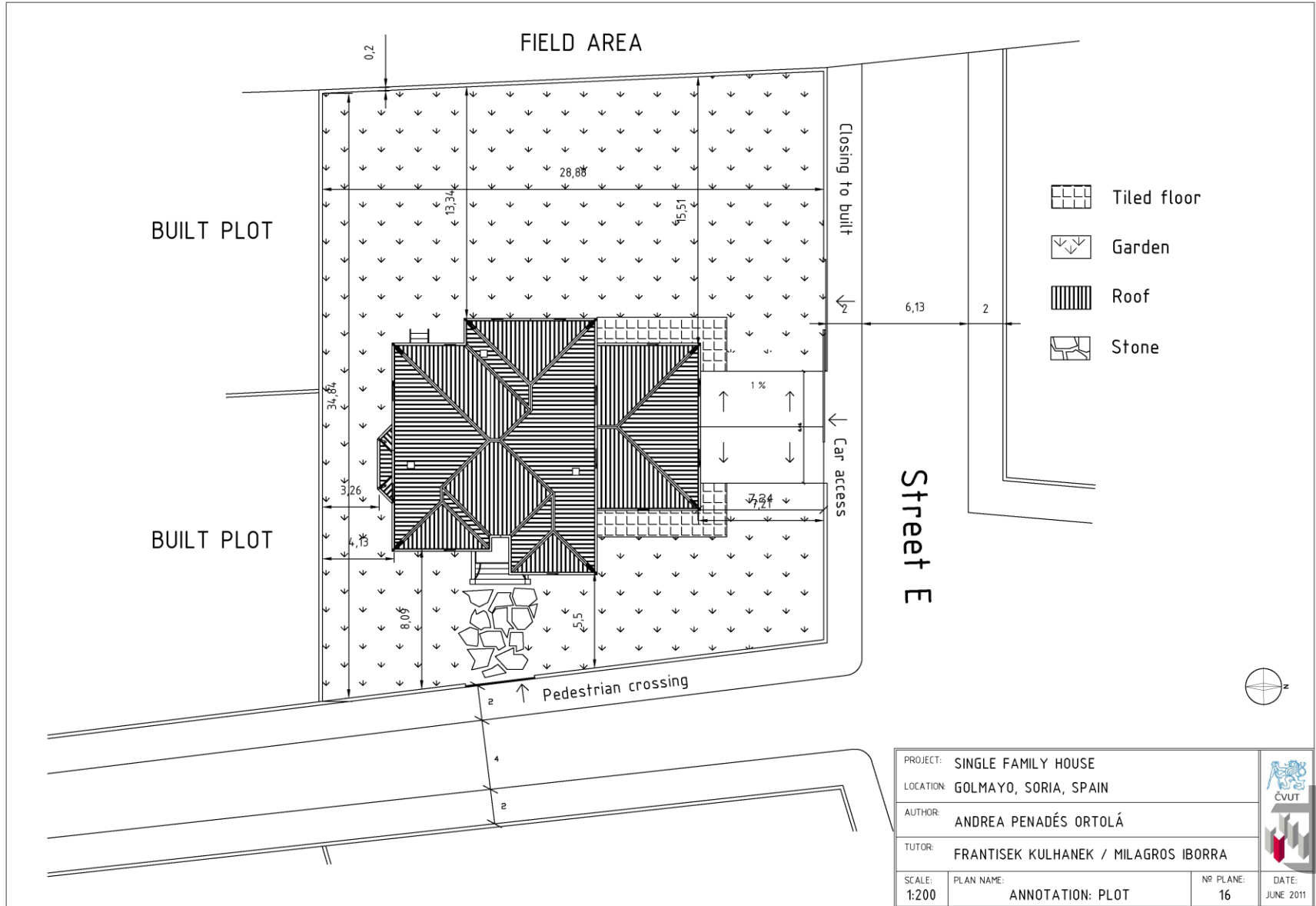
SECCIÓN B-B'



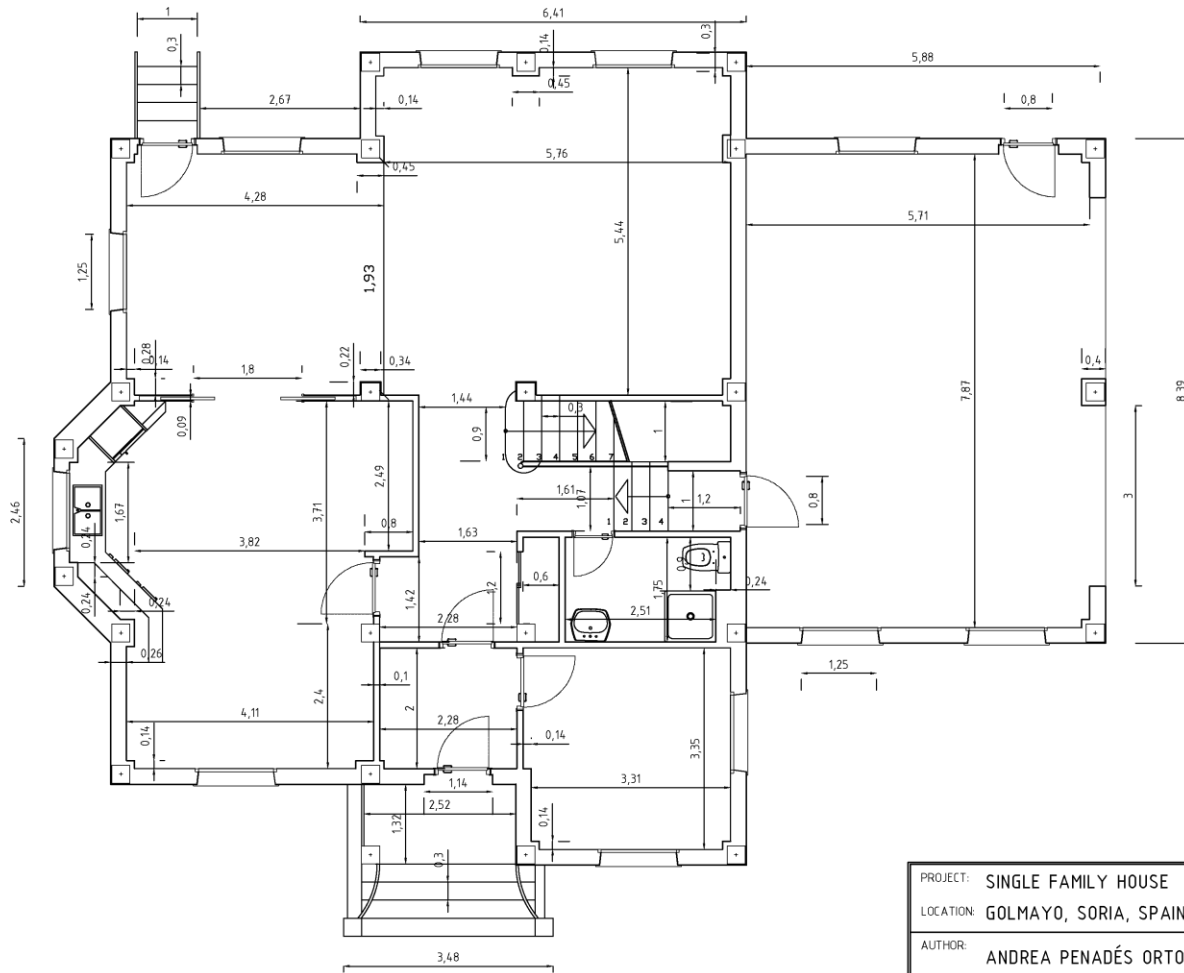




PLANOS DE COTAS

PARCELA

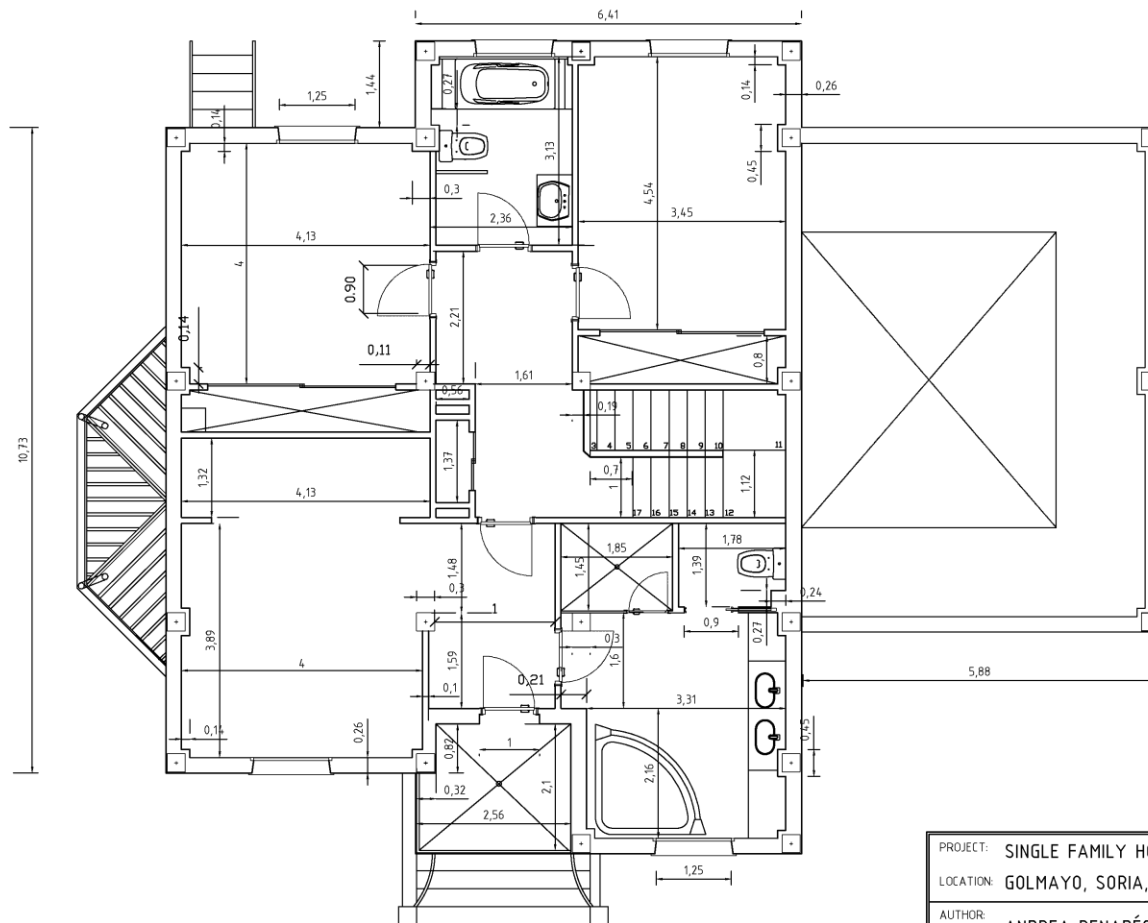




PLANTA BAJA



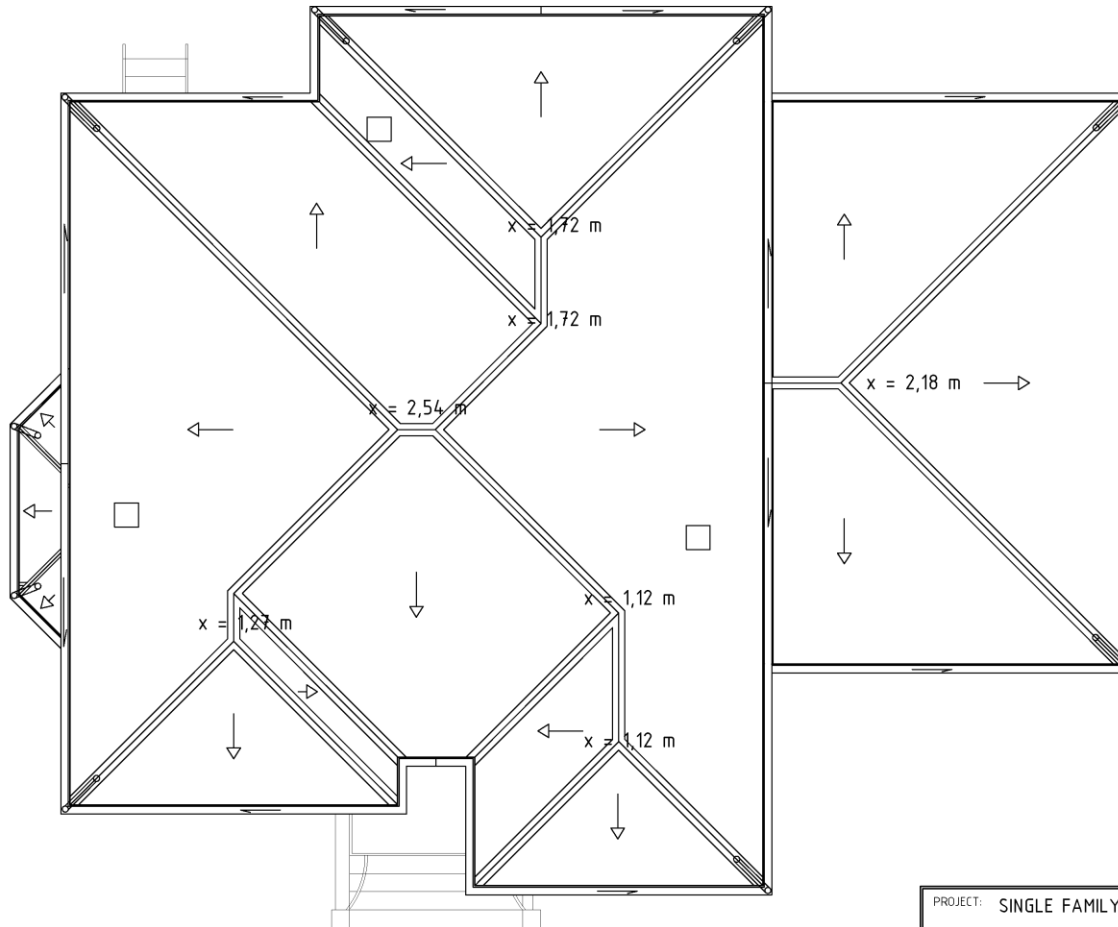
PROJECT: SINGLE FAMILY HOUSE			
LOCATION: GOLMAYO, SORIA, SPAIN			
AUTHOR: ANDREA PENADÉS ORTOLÁ			
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE: 1:75	PLAN NAME: ANNOTATION: GROUND FLOOR	Nº PLANE: 17	DATE: JUNE 2011

PLANTA PRIMERA



PROJECT: SINGLE FAMILY HOUSE		 
LOCATION: GOLMAYO, SORIA, SPAIN		
AUTHOR: ANDREA PENADÉS ORTOLÁ		
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE: 1:75	PLAN NAME: ANNOTATION: FIRST FLOOR	Nº PLANE: 18
		DATE: JUNE 2011

CUBIERTA



PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	ANNOTATION: ROOF	19	JUNE 2011



ALZADO ESTE



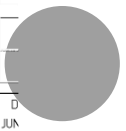
PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	ANNOTATION: EAST ELEVATION	20	JUNE 2011



ALZADO OESTE



PROJECT:	SINGLE FAMILY HOUSE	
LOCATION:	GOLMAYO, SORIA, SPAIN	
AUTHOR:	ANDREA PENADÉS ORTOLÁ	
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA	
SCALE:	PLAN NAME:	Nº PLANE:
1:75	ANNOTATION: WEST ELEVATION	21



ALZADO NORTE





PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	ANNOTATION: NORTH ELEVATION	22	JUNE 2011



ALZADO SUR



PROJECT:	SINGLE FAMILY HOUSE		 
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	ANNOTATION: SOUTH ELEVATION	23	JUNE 2011

A decorative vertical bar on the left side of the slide, consisting of several vertical lines of varying widths and shades of gray, and a series of circles of different sizes arranged vertically. The largest circle is at the top, and the sizes decrease as they go down.

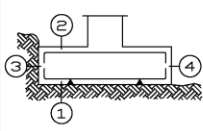
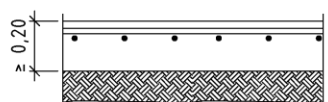
ESTRUCTURA Y CIMENTACIÓN

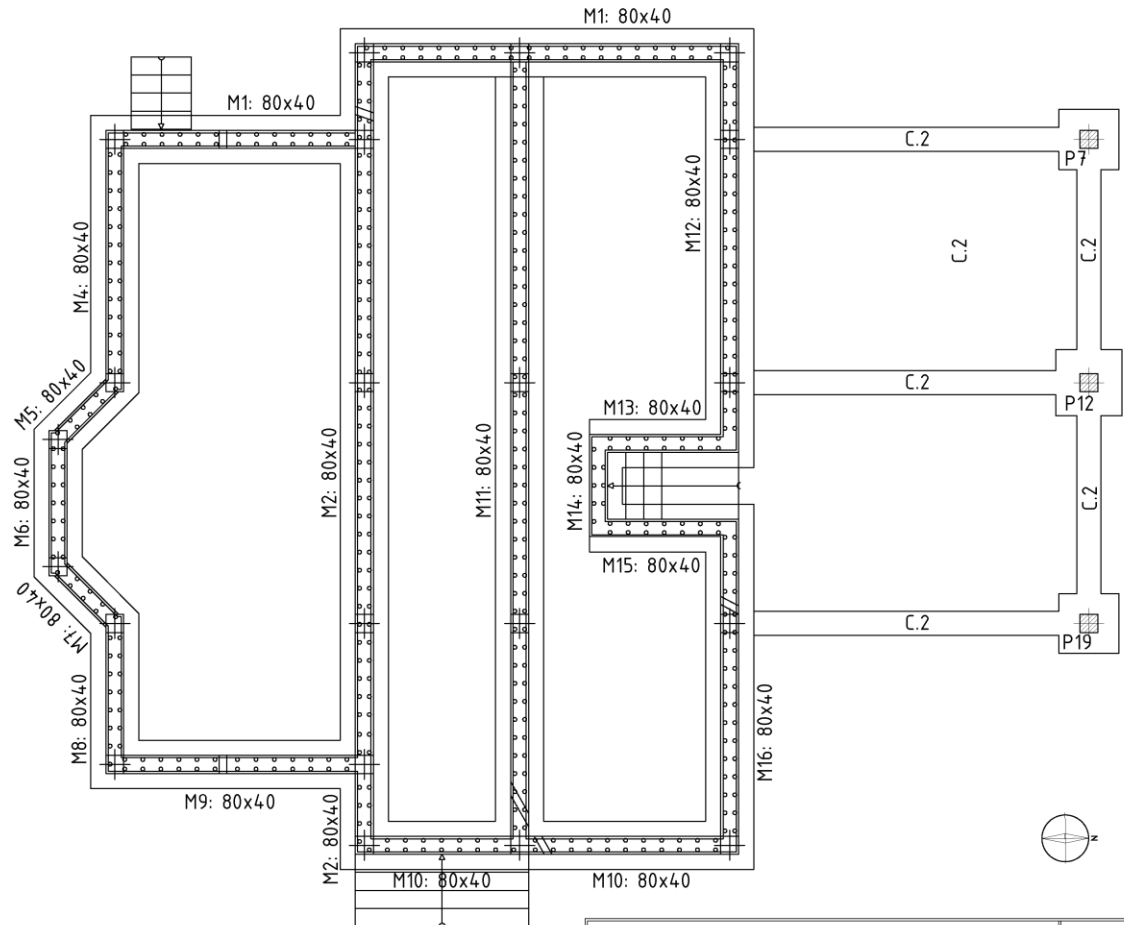
CIMENTACIÓN

- En base a los datos recogidos en el estudio geotécnico, se adoptan las siguientes premisas de tipología y cálculo de cimentación y disposiciones constructivas de la misma: Sistema superficial mediante zapatas corridas con muro de 0,85 m apoyados en ellas, para crear un forjado sanitario.
- El método de cálculo utilizado para el dimensionamiento de zapatas y muros, y sus armaduras es el recogido en la propia norma EHE-08.
- Como se ha podido comprobar, el valor de la tensión admisible es prudente, no obstante se estará a lo que determine el preceptivo informe geotécnico del terreno.

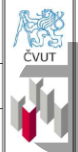


CIMENTACIÓN

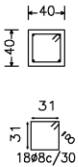
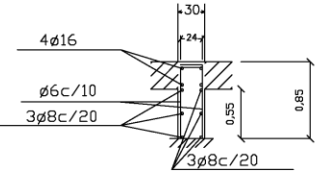
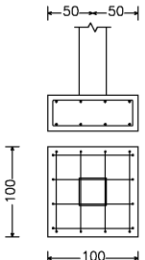
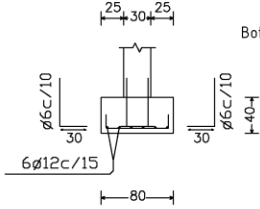
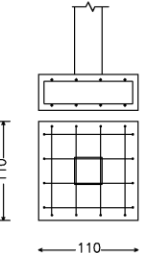
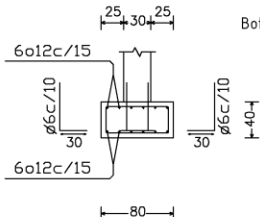
Characteristic chart EHE								
Materials	Concrete				Steel			
	Characteristics				Characteristics			
Elements	Level control	Weighting coef.	Type	Max. aggregating size	Level control	Weighting coef.	Type	
All the work	Normal	$\gamma_c = 1,50$	HA-25	15/20 mm	Normal	$\gamma_s = 1,15$	B 500 S	
Foundation	Normal	$\gamma_c = 1,50$	HA-25	15/20 mm	Normal	$\gamma_s = 1,15$	B 500 S	
Walls	Normal	$\gamma_c = 1,50$	HA-25	15/20 mm	Normal	$\gamma_s = 1,15$	B 500 S	
Pillars	Normal	$\gamma_c = 1,50$	HA-25	15/20 mm	Normal	$\gamma_s = 1,15$	B 500 S	
Beams & slabs	Normal	$\gamma_c = 1,50$	HA-25/B/20/IIa					
Notes								
Overlaps as EHE								
Coatings								
	① Lower coating in contact with the ground ≥ 8 cm ② Upper free coating 4/5cm. ③ Lateral coating in contact with the ground 5cm. ④ Lateral free coating 4/5cm.							
	Sill detail							
		Mesh reinforcement # 15x15φ6						
Geotechnical data								
Allowable stresses of the ground $\sigma_{allow} = 2,0 \text{ Kg/cm}^2$								
Divider disposal								
Element		Maximum distance						
Bottom horizontal elements (slab, brake shoe...)	Bottom grating	50 ϕ or 100cm						
	Upper grating	50 ϕ or 100cm						
Walls	Each grating	50 ϕ or 100cm						
	Sep. between grating	100cm						
Beams	100cm							
Support	100 ϕ or 200cm							



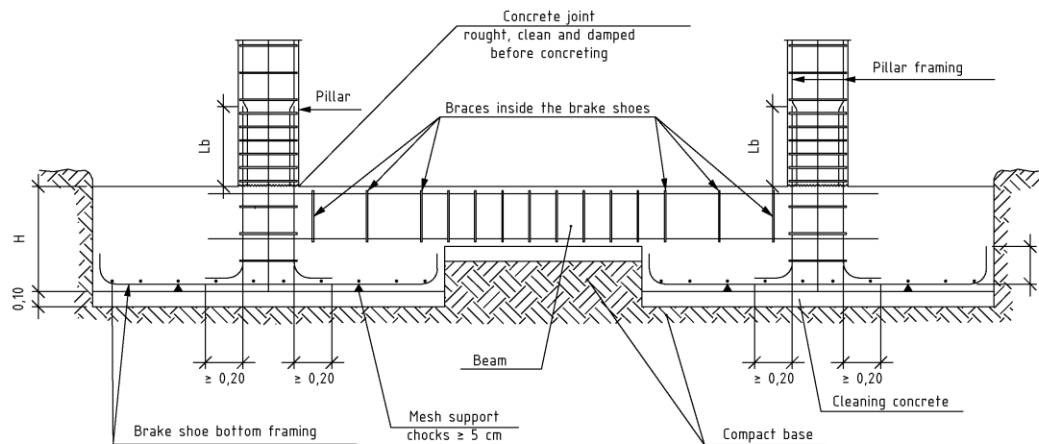
PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	FOUNDATION	24	JUNE 2011



CIMENTACIÓN

Beams table	Foundation wall table	Brake shoe table	Strip footing table
<p>C.2</p>  <p>Upper framing: 2ø16</p> <p>Bottom framing: 2ø16</p> <p>Braces: 1ø8 c/30</p>	 <p>4ø16</p> <p>ø6c/10</p> <p>3ø8c/20</p> <p>3ø8c/20</p> <p>30</p> <p>0.24</p> <p>0.55</p> <p>0.85</p>	 <p>P7 y P19</p> <p>Upper framing: 1ø16 c/27</p> <p>Bottom framing: 1ø16 c/27</p> <p>50</p> <p>50</p> <p>40</p> <p>100</p> <p>100</p>	 <p>Bottom framing: 1ø12 c/15</p> <p>25</p> <p>30</p> <p>25</p> <p>ø6c/10</p> <p>30</p> <p>ø6c/10</p> <p>40</p> <p>80</p> <p>6ø12c/15</p>
		 <p>P12</p> <p>Upper framing: 1ø16 c/27</p> <p>Bottom framing: 1ø16 c/27</p> <p>40</p> <p>110</p> <p>110</p>	 <p>Bottom framing: 1ø12 c/15</p> <p>25</p> <p>30</p> <p>25</p> <p>ø6c/10</p> <p>30</p> <p>ø6c/10</p> <p>40</p> <p>80</p> <p>6ø12c/15</p>

Beam between brake shoes



PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:50	DETAIL FOUNDATION	25	JUNE 2011

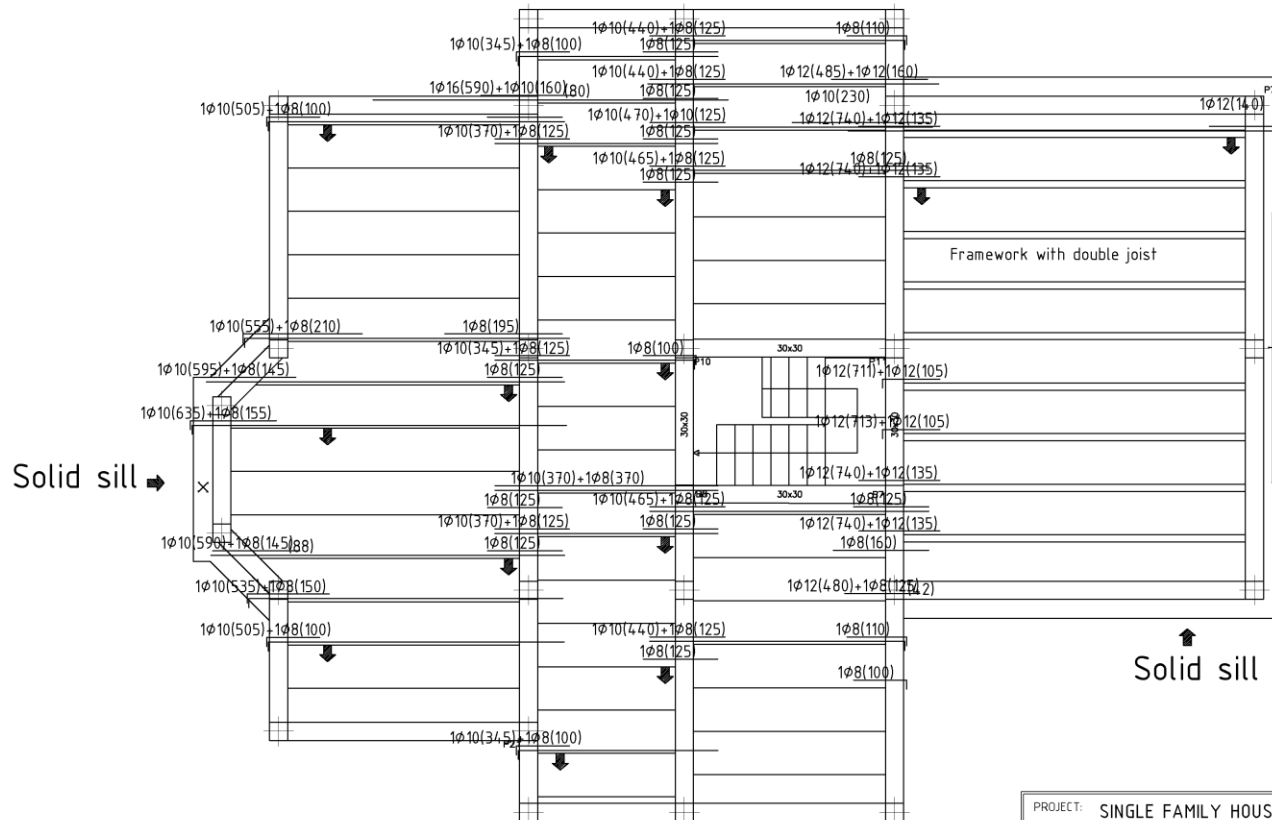


ESTRUCTURA

- La estructura de las plantas se realiza con forjados unidireccionales de viguetas y bovedillas de hormigón intereje de 72 cm., que apoyan en vigas y pilares de hormigón armado , acero en viguetas, armaduras de reparto y complementarias, relleno de senos y capa de compresión de 5 cm. de espesor, todo ello ejecutado según lo establecido conforme a la normativa vigente. Para todos los casos se han utilizado forjados unidireccionales de hormigón armado de 30 cm. de canto (25+5).
- Se ha supuesto que los materiales tienen un comportamiento elástico, y para el dimensionamiento de los distintos elementos se ha seguido el método de cálculo basado en los estados límites últimos y de servicio.



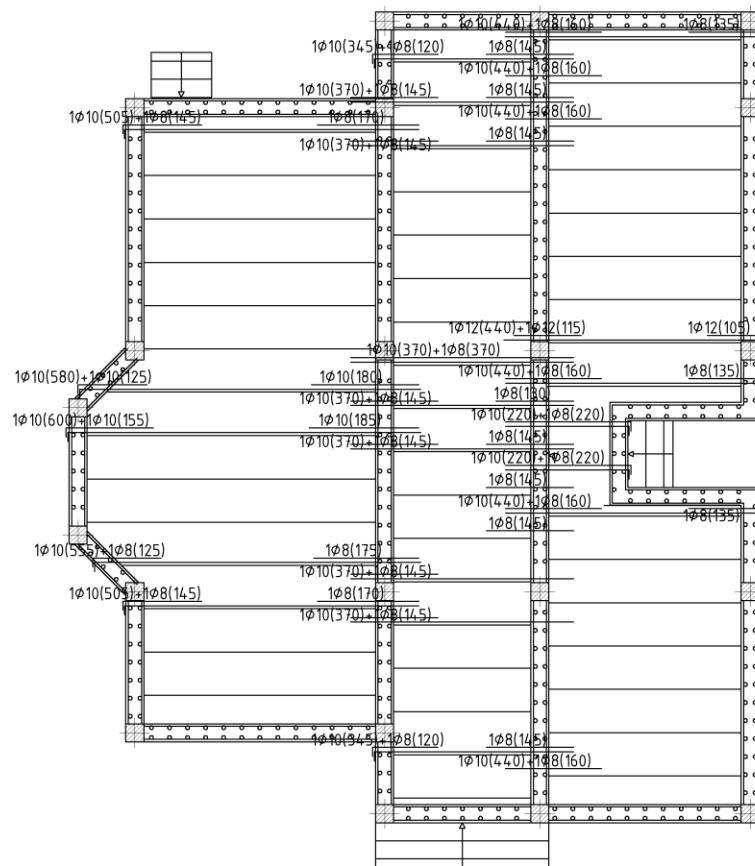
FORJADO PLANTA BAJA



PROJECT: SINGLE FAMILY HOUSE			
LOCATION: GOLMAYO, SORIA, SPAIN			
AUTHOR: ANDREA PENADÉS ORTOLÁ			
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE: 1:75	PLAN NAME: FRAMING GRPOUND FLOOR SLAB	Nº PLANE: 29	DATE: JUNE 2011



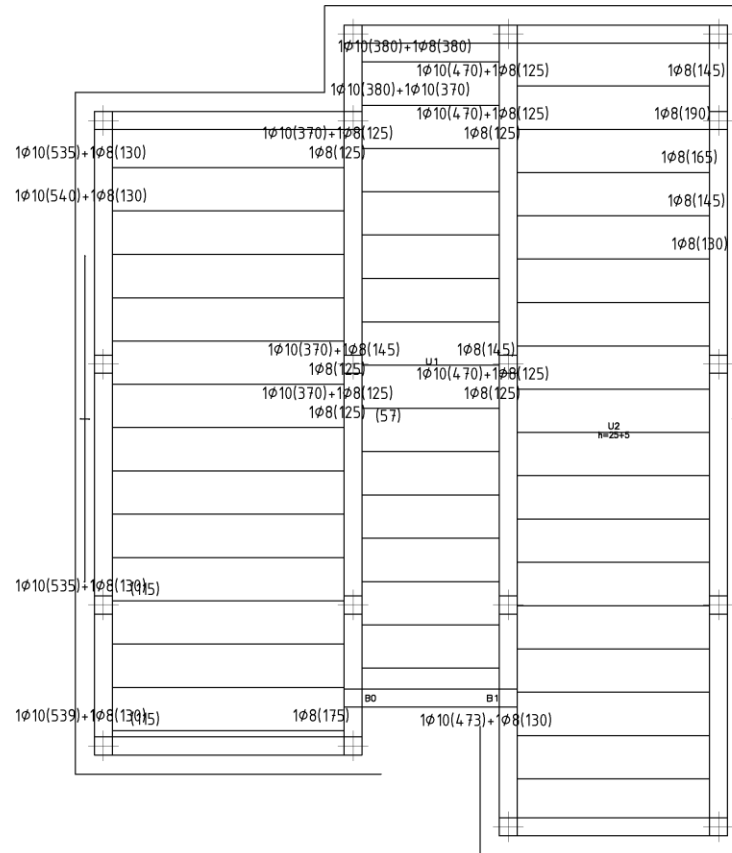
FORJADO PLANTA PRIMERA



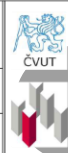
PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	№ PLANE:	DATE:
1:75	FRAMING FLOOR SLAB	27	JUNE 2011



FORJADO CUBIERTA



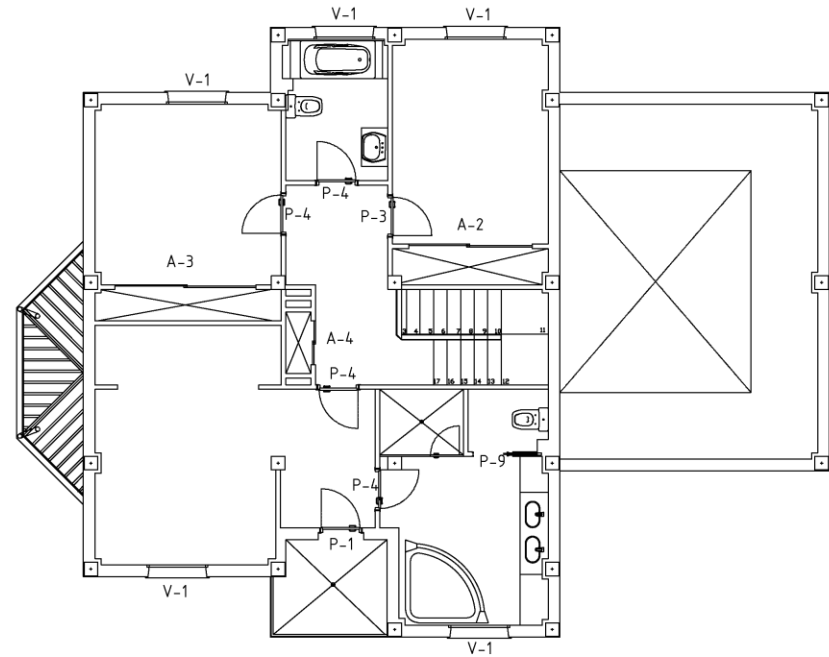
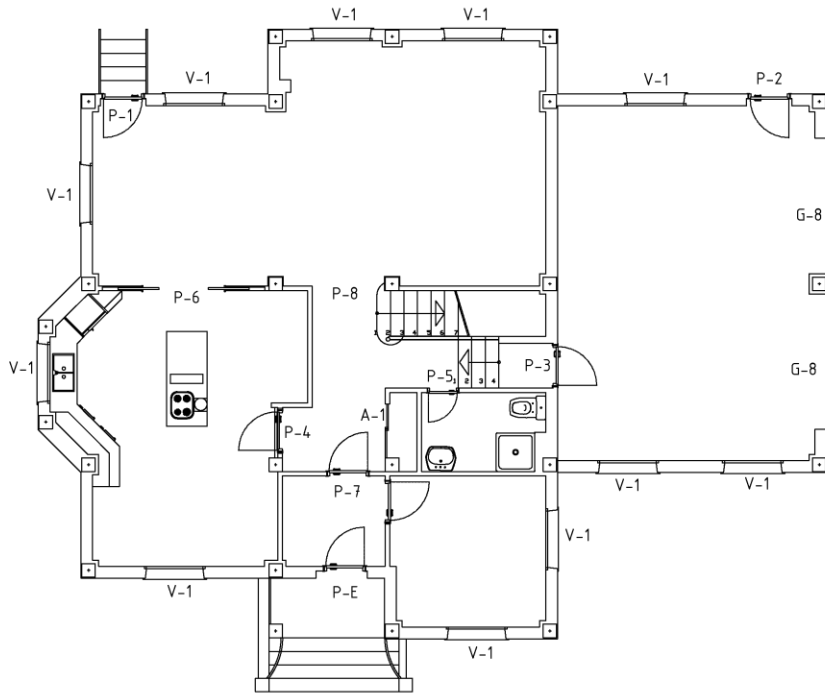
PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	FRAMING FIRST FLOOR SLAB	31	JUNE 2011





CARPINTERÍA

CARPINTERÍA

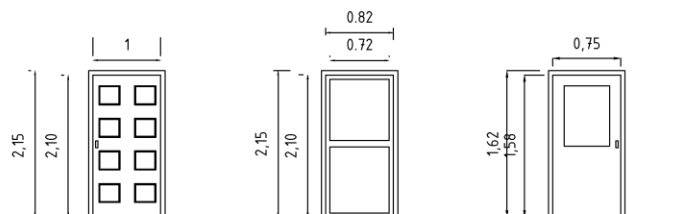


PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	CARPENTRY DEALS	33	JUNE 2011



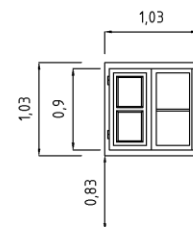
CARPINTERÍA

EXTERIOR CARPENTRY WOOD-ALUMINIUM : DOORS



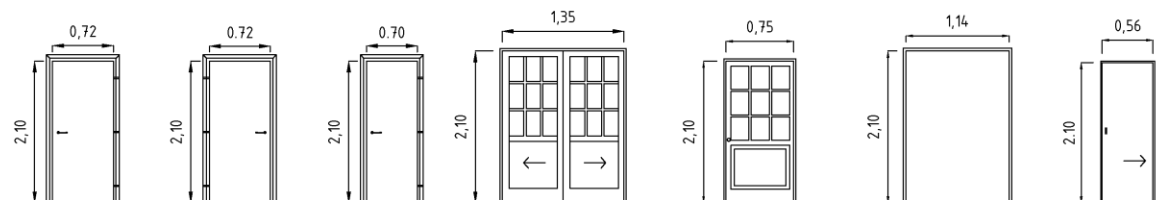
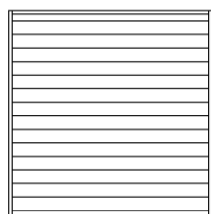
TYPE	P-E (Reinforced)	P-1	P-2
LEAF DIMENSION	210 x 100 x 4,5	210 x 100 x 4,5	210 x 100 x 4,5
NUMBER	1	2	1

EXTERIOR CARPENTRY WOOD-ALUMINIUM: WINDOWOOD: SHUTTER



TYPE	V-1
NUMBER	16
GLAZING	DOUBLE GLASS, INTERIOR CHAMBER
SHUTTER	OAK WOOD

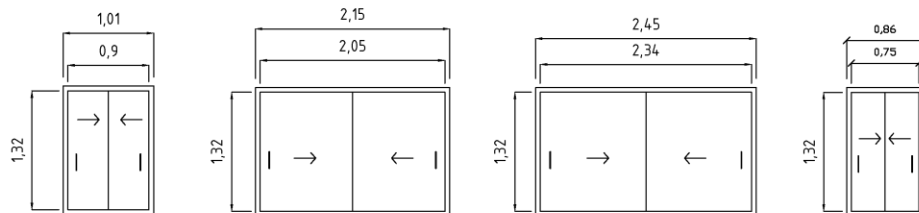
EXTERIOR CARPENTRY GARAGE DOOR



TYPE	G-8	P-3	P-4	P-5	P-6	P-7	P-8	P-9
LEAF DIMENSION	300 x 300	210 x 90 x 3,5	210 x 90 x 3,5	210 x 75 x 3,5	225 x 180	210 x 100	225 x 153	210 x 75
NUMBER	2	2	6	1	1	1	1	1

INTERIOR WOOD CARPENTRY - DOORS

INTERIOR WOOD CARPENTRY - SLIDING WARDROBE DOORS

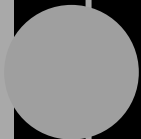


TYPE	A-1	A-2	A-3	A-4
LEAF DIMENSION	176 x 120 x 3,5	176 x 273 x 3,5	176 x 320 x 3,5	176 x 100 x 3,5
NUMBER	1	1	1	1



PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:100	CARPENTRY SUMMARY	32	JUNE 2011





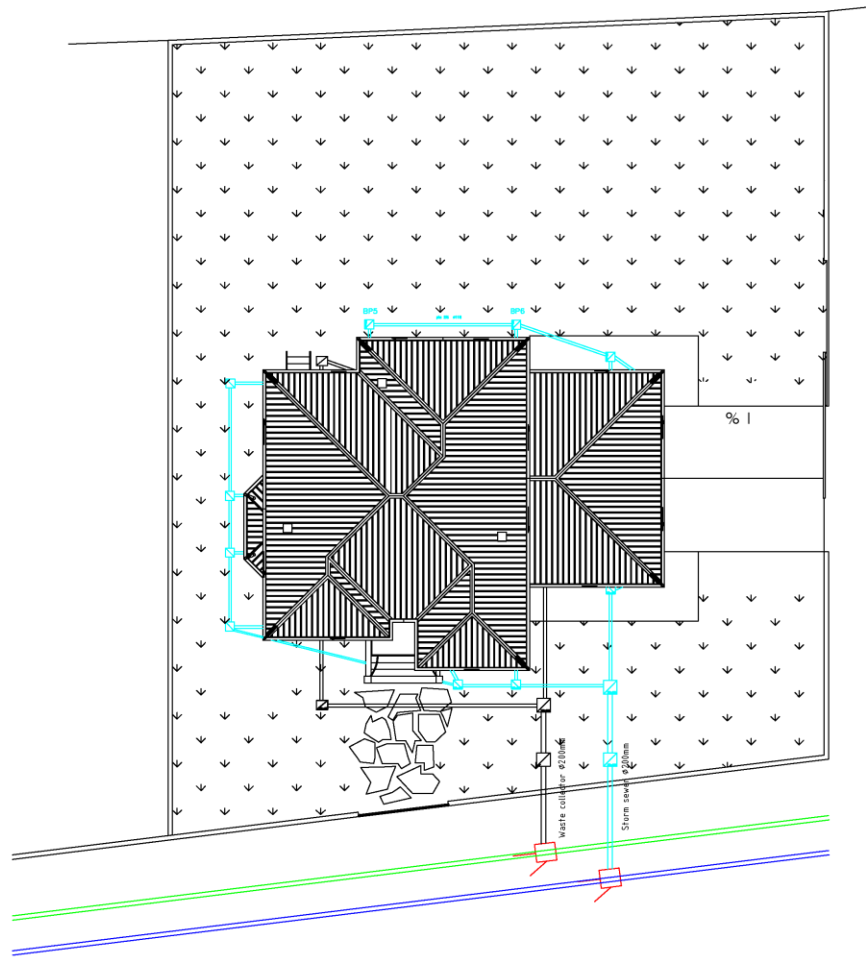
INSTALACIONES












SANEAMIENTO

- La red de saneamiento recogerá las bajantes de cuartos húmedos de vivienda así como las pluviales. Estos se agruparán en diferentes colectores siguiendo su trazado hasta su conexión con las arquetas generales de acometida a la red general de vertido. Los colectores generales, así como los desagües de aparatos sanitarios, fregaderos, lavadora, etc. se realizarán mediante tubería de PVC de diámetro variable y según el trazado y dimensiones establecidas en los planos del proyecto.
- La red llevará una pendiente mínima del 1,5% y se colocarán arquetas registrables dimensionadas adecuadamente para el mantenimiento de la red, sumideros, etc.



SANEAMIENTO



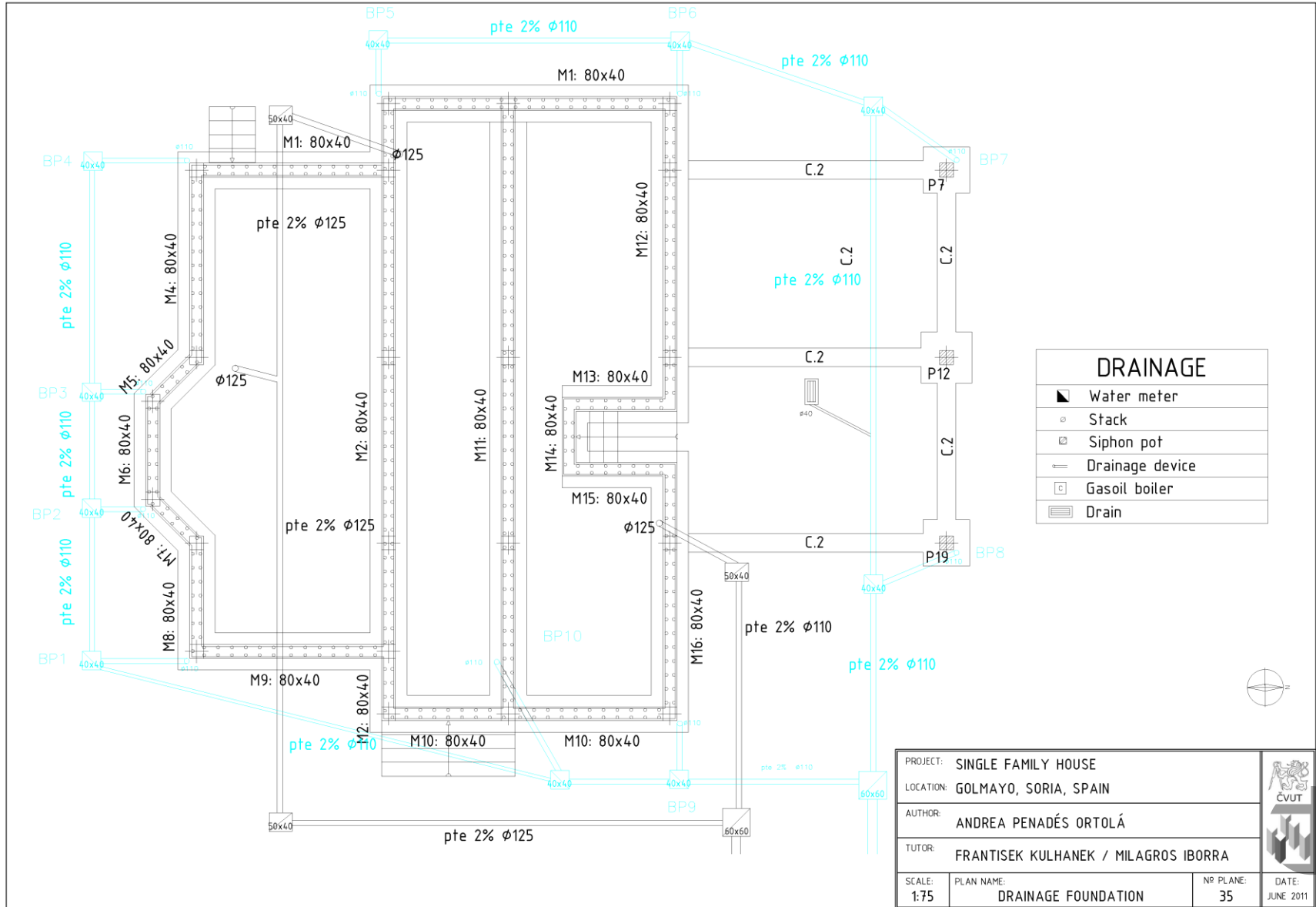
-  Garden
-  Roof
-  Stone
-  Concrete sill plate
-  Residual concrete pipe
-  Storm concrete pipe
-  PVC pipe tube (PN10) Ø150mm
-  Small chest 60x60cm
-  Particular connection PVC pipe Ø 200mm
-  Waste collector
-  Storm sewer



PROJECT: SINGLE FAMILY HOUSE			
LOCATION: GOLMAYO, SORIA, SPAIN			
AUTHOR: ANDREA PENADÉS ORTOLÁ			
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE: 1:200	PLAN NAME: DRAINAGE SYSTEM	Nº PLANE: 34	DATE: JUNE 2011



SANEAMIENTO

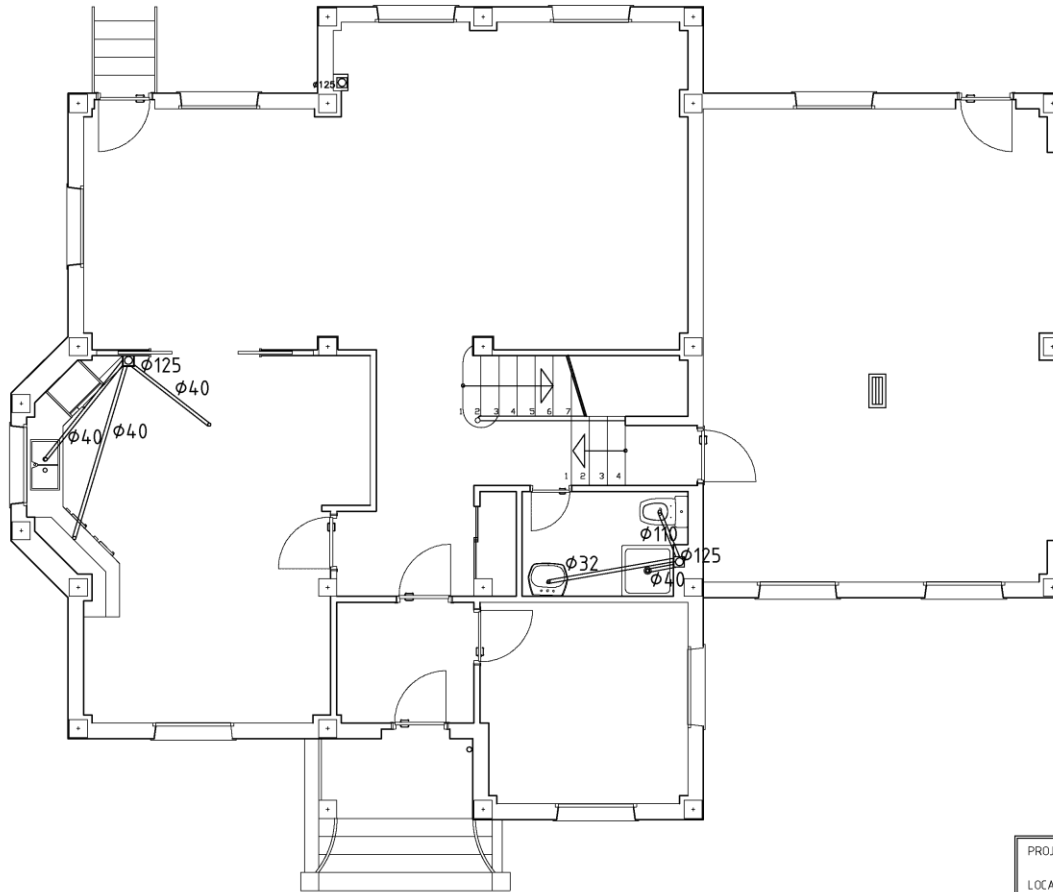


DRAINAGE	
	Water meter
	Stack
	Siphon pot
	Drainage device
	Gasoil boiler
	Drain

PROJECT: SINGLE FAMILY HOUSE			
LOCATION: GOLMAYO, SORIA, SPAIN			
AUTHOR: ANDREA PENADÉS ORTOLÁ			
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE: 1:75	PLAN NAME: DRAINAGE FOUNDATION	Nº PLANE: 35	DATE: JUNE 2011



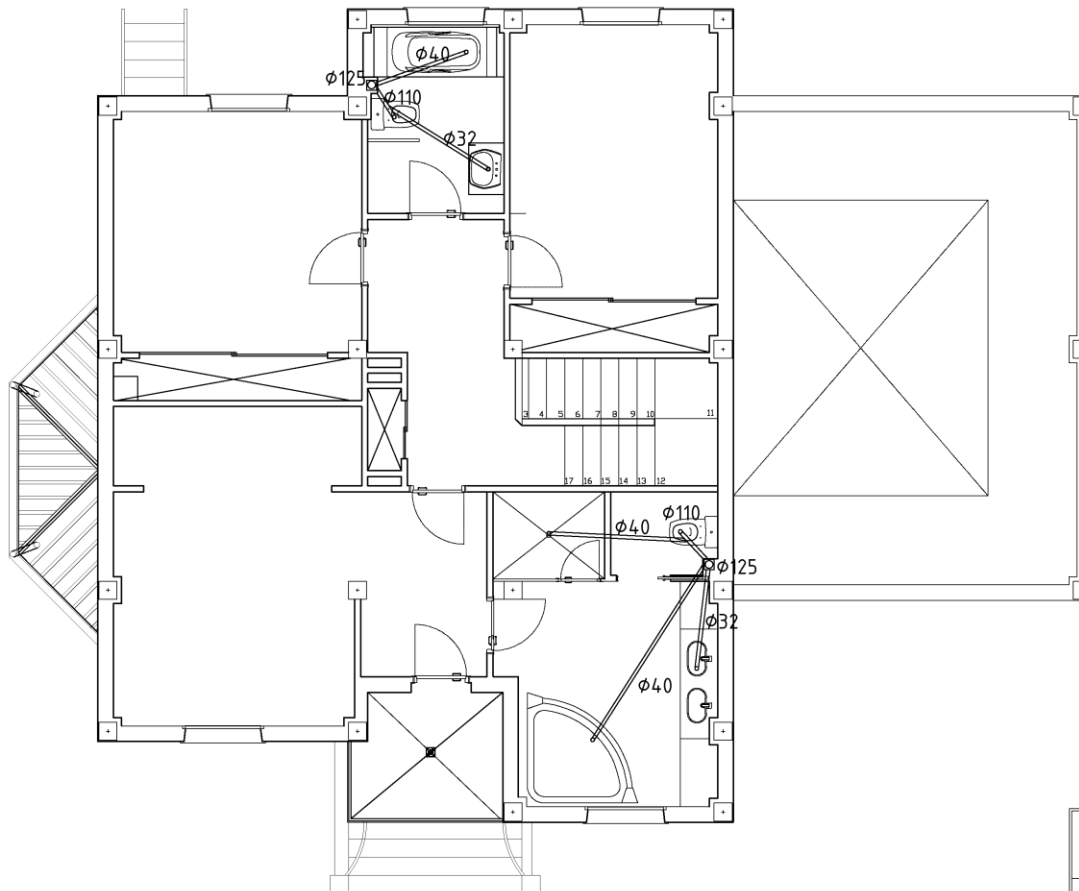
SANEAMIENTO



DRAINAGE	
	Water meter
	Stack
	Siphon pot
	Drainage device
	Gasoil boiler
	Drain

PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	DRAINAGE: GROUND FLOOR	36	JUNE 2011

SANEAMIENTO



DRAINAGE	
	Water meter
	Stack
	Siphon pot
	Drainage device
	Gasoil boiler
	Drain

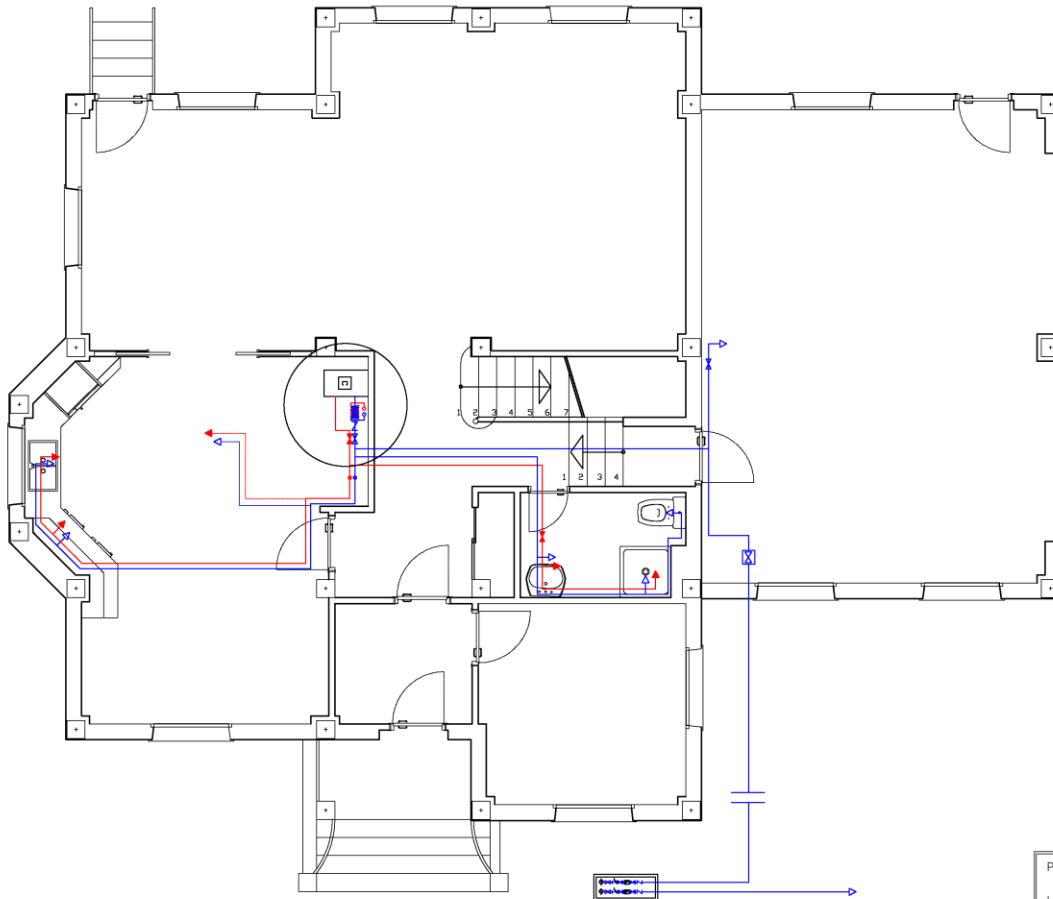
PROJECT:	SINGLE FAMILY HOUSE			
LOCATION:	GOLMAYO, SORIA, SPAIN			
AUTHOR:	ANDREA PENADÉS ORTOLÁ			
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE:	PLAN NAME:	Nº PLANE:	DATE:	
1:75	DRAINAGE: FIRST FLOOR	37	JUNE 2011	

FONTANERÍA

- Del contador partirá la derivación de la vivienda, se ejecutará con tubería de cobre de diámetro variable en función del caudal necesario para los distintos tramos proyectados.
- La grifería será monobloque cromado, instalándose llaves de corte general y en aparatos, tomas de agua exteriores (en su caso), etc.
- Los aparatos sanitarios serán de porcelana vitrificada, siendo la bañera de chapa de acero esmaltado. Su instalación estará equipada con las llaves de corte general y en aparatos, latiguillos flexibles, etc., así como de los accesorios necesarios para su correcto funcionamiento.
- Las tuberías proyectadas para la red de desagües serán de PVC



FONTANERÍA



PLUMBING SYSTEM

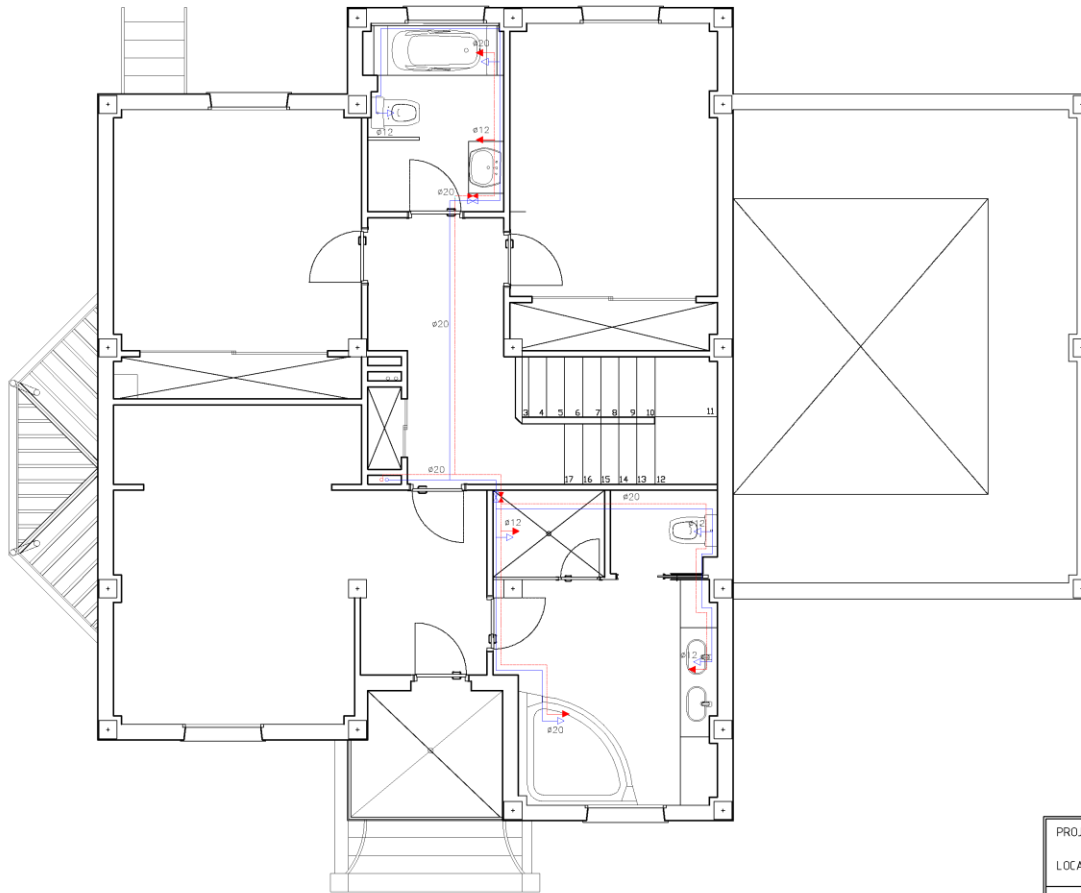
	Municipal connection
	Socket valve
	Stopcock
	General stopcock
	Filter
	Check valve
	Water meter
	Cold water gate valve
	Hot water gate valve
	Cold water canalization
	Hot water canalization
	Cold water tap
	Hot water tap
	Natural gas boiler
	Exanger solar tank



PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	PLUMBING: GROUND FLOOR	39	JUNE 2011



FONTANERÍA



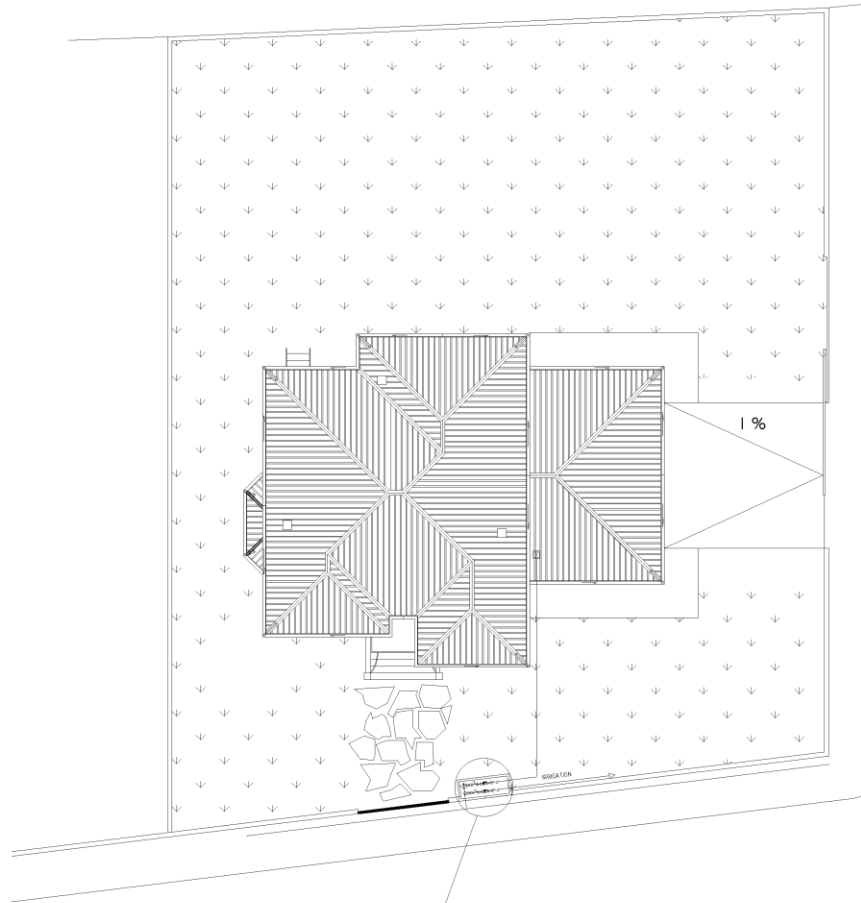
PLUMBING SYSTEM	
	Municipal connection
	Socket valve
	Stopcock
	General stopcock
	Filter
	Check valve
	Water meter
	Cold water gate valve
	Hot water gate valve
	Cold water canalization
	Hot water canalization
	Cold water tap
	Hot water tap
	Natural gas boiler
	Exchanger solar tank
















PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	PLUMBING: FIRST FLOOR	38	JUNE 2011



FONTANERÍA

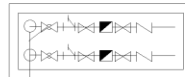


Street

-  Garden
-  Roof
-  Stone
-  Concrete sill plate
-  Municipal connection
-  Socket valve
-  Stopcock
-  General stopcock
-  Filter
-  Check valve
-  Water meter
-  Cold water gate valve
-  Cold water canalization



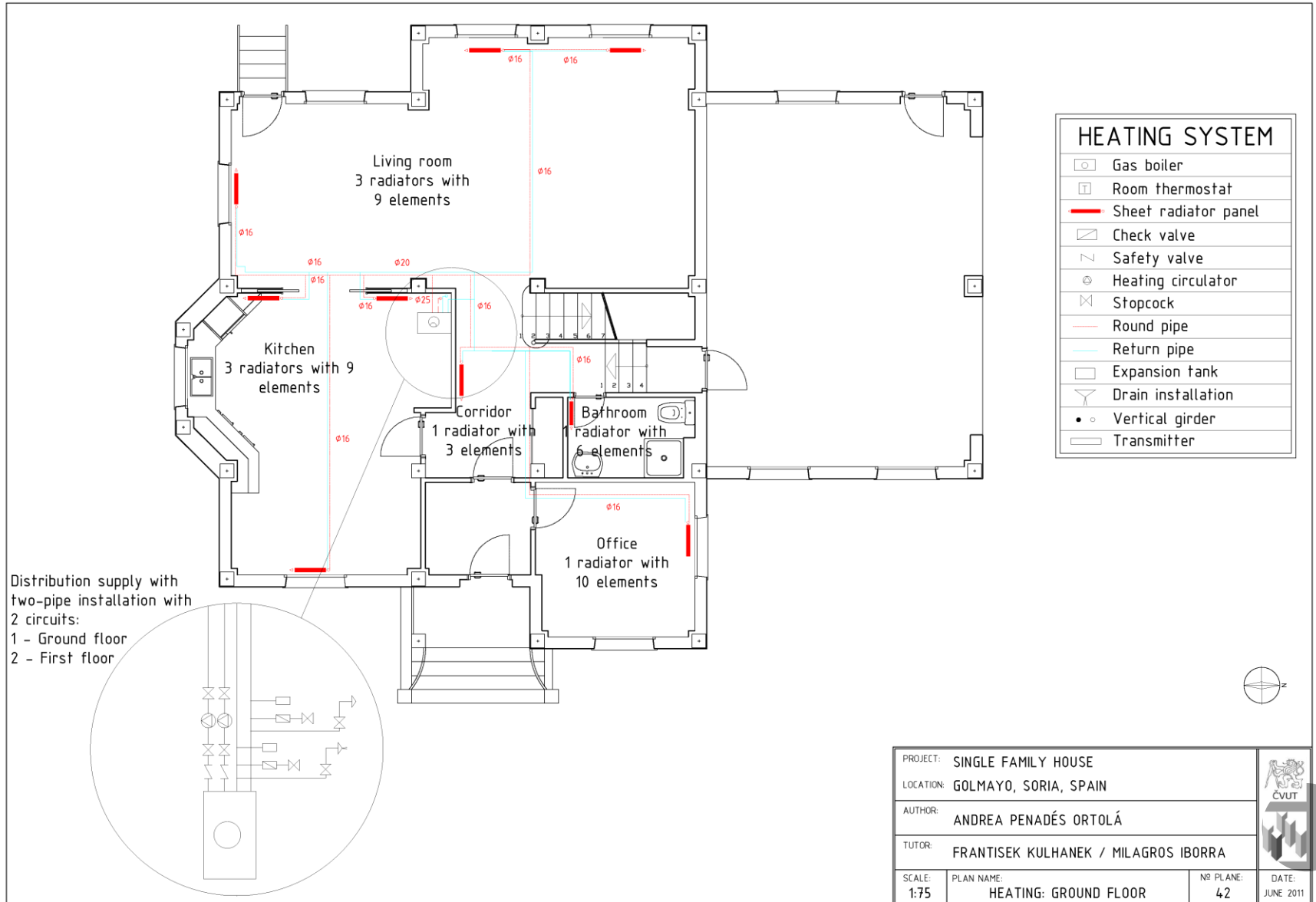
WATER METER DETAIL



PROJECT: SINGLE FAMILY HOUSE			
LOCATION: GOMAYO, SORIA, SPAIN			
AUTHOR: ANDREA PENADÉS ORTOLÁ			
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE: 1:200	PLAN NAME: WATER SUPPLY SYSTEM	Nº PLANE: 38	DATE: JUNE 2011



CALEFACCIÓN



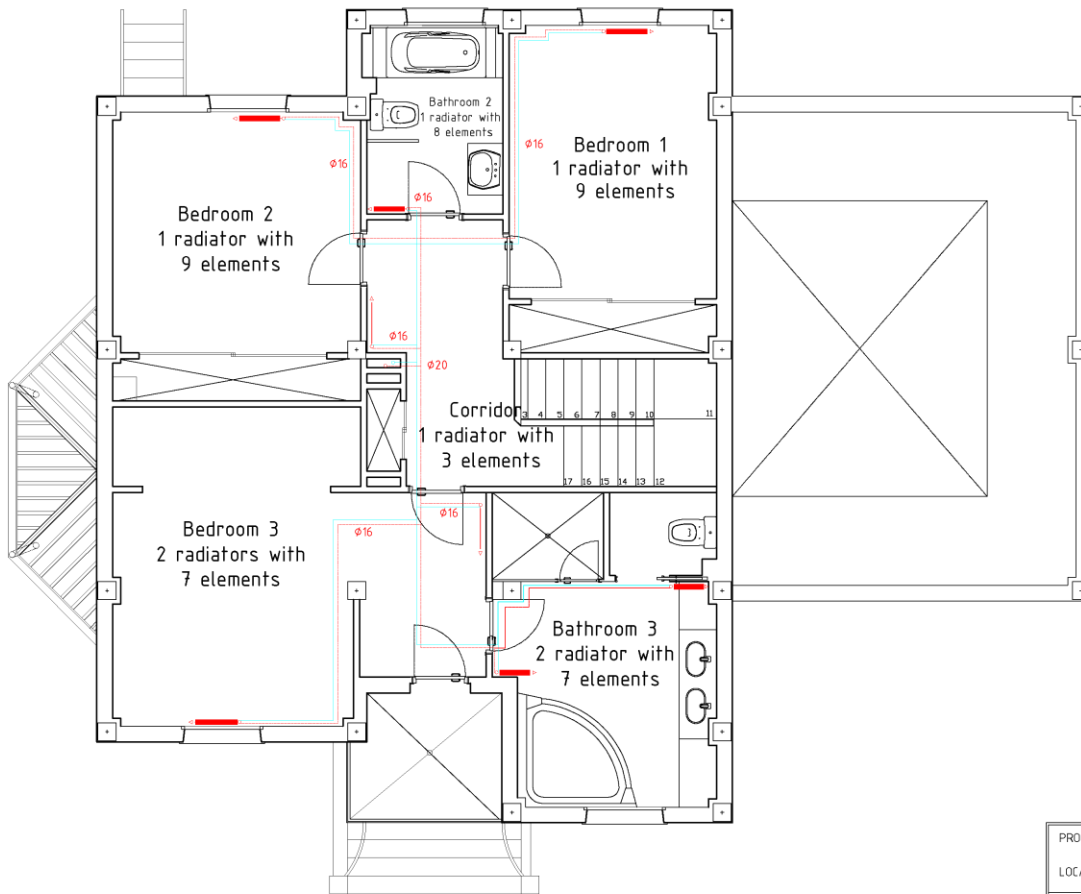
HEATING SYSTEM	
	Gas boiler
	Room thermostat
	Sheet radiator panel
	Check valve
	Safety valve
	Heating circulator
	Stopcock
	Round pipe
	Return pipe
	Expansion tank
	Drain installation
	Vertical girder
	Transmitter



PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	HEATING: GROUND FLOOR	42	JUNE 2011



CALEFACCIÓN



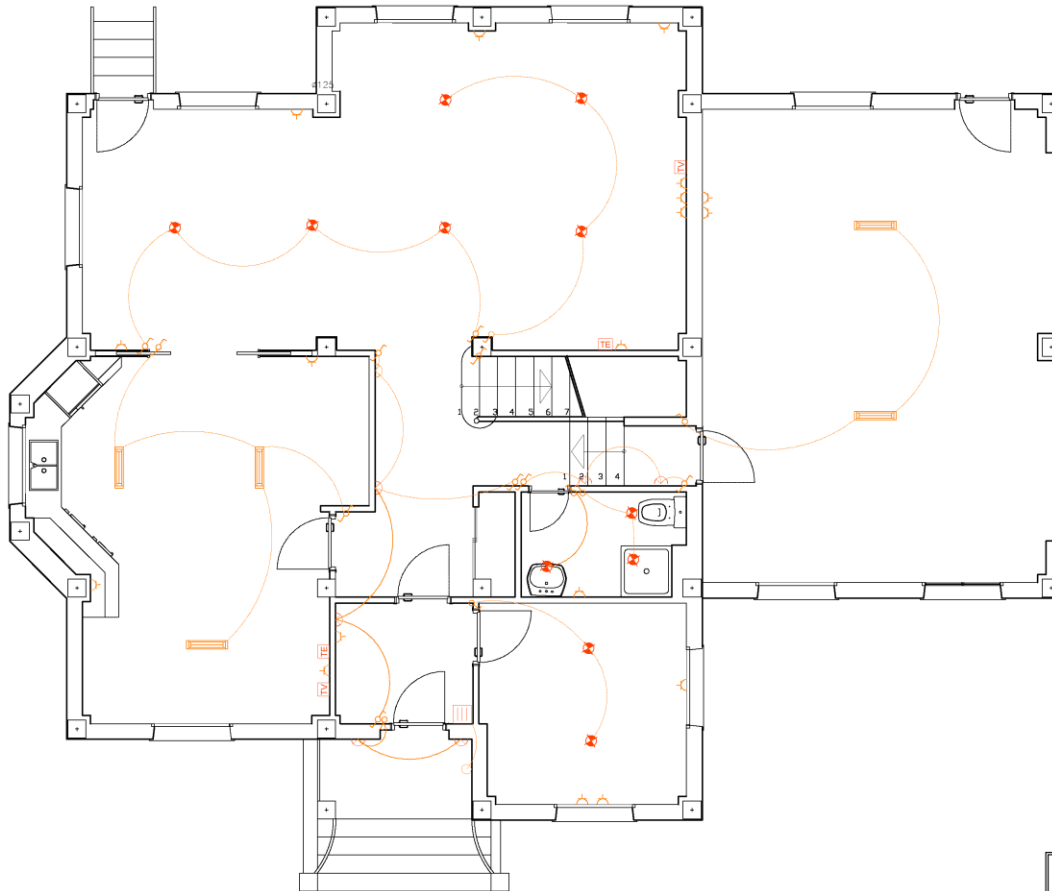
HEATING SYSTEM

	Gas boiler
	Room thermostat
	Sheet radiator panel
	Check valve
	Safety valve
	Heating circulator
	Stopcock
	Round pipe
	Return pipe
	Expansion tank
	Drain installation
	Vertical girder
	Transmitter













PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	HEATING: FIRST FLOOR	43	JUNE 2011



ELECTRICIDAD



VENTILATION

	TV socket
	General distribution box
	Stopcock
	Simple switch
	Changed over switch
	Socket
	Ceiling light point
	Fluorescent
	Wall light point
	Button
	Buzzer
	Telephone power point



PROJECT: SINGLE FAMILY HOUSE			
LOCATION: GOLMAYO, SORIA, SPAIN			
AUTHOR: ANDREA PENADÉS ORTOLÁ			
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA			
SCALE: 1:75	PLAN NAME: ELECTRICITY: GROUND FLOOR	Nº PLANE: 46	DATE: JUNE 2011



ELECTRICIDAD

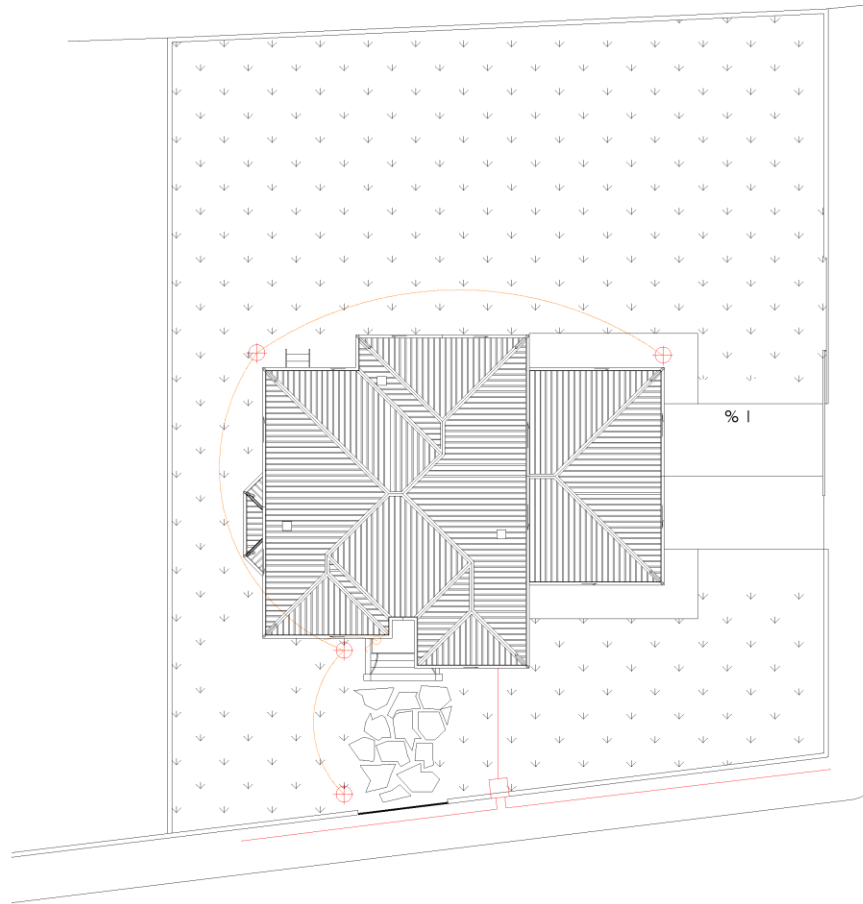











VENTILATION	
	TV socket
	General distribution box
	Stopcock
	Simple switch
	Changed over switch
	Socket
	Ceiling light point
	Fluorescent
	Wall light point
	Button
	Buzzer
	Telephone power point


PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	ELECTRICITY: FIRST FLOOR	47	JUNE 2011



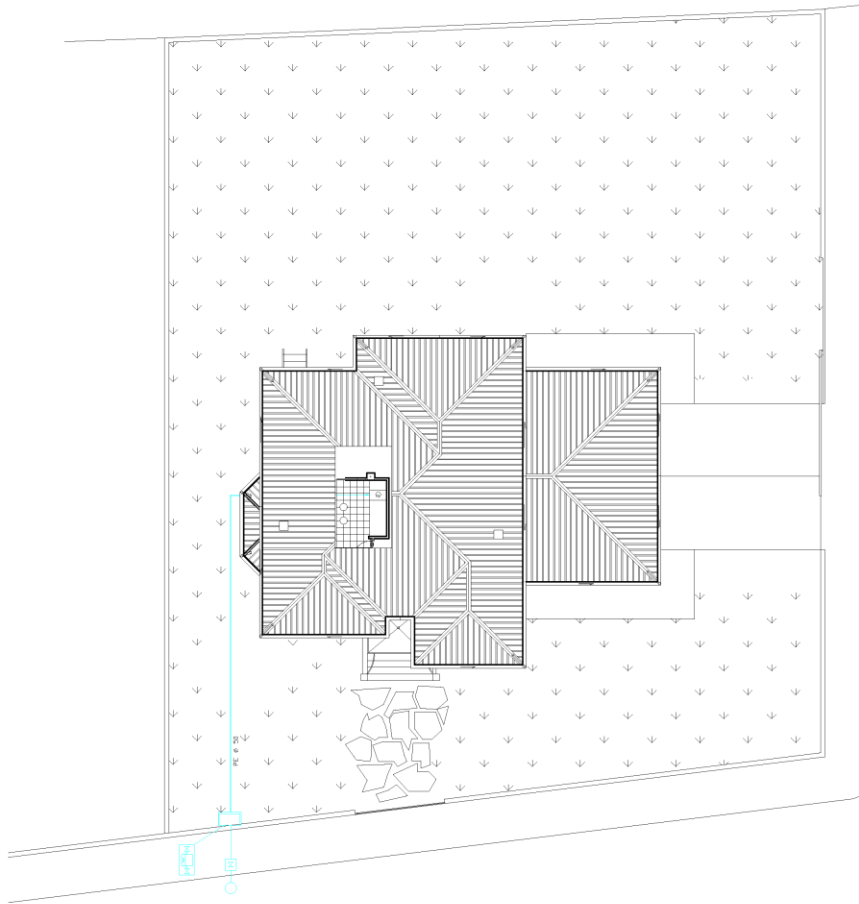
ELECTRICIDAD











-  Garden
-  Roof
-  Stone
-  Concrete sill plate
-  Switch
-  Circuit
-  Light 100w.
-  Underground low voltage network (Copper conductor RV 0.6/1 KV 2x1x16 mm²)
-  Protective device (E/S 400A)

PROJECT: SINGLE FAMILY HOUSE				
LOCATION: GOLMAYO, SORIA, SPAIN				
AUTHOR: ANDREA PENADÉS ORTOLÁ				
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA				
SCALE: 1:200	PLAN NAME: LIGHTNING SYSTEM	Nº PLANE: 45	DATE: JUNE 2011	


GAS



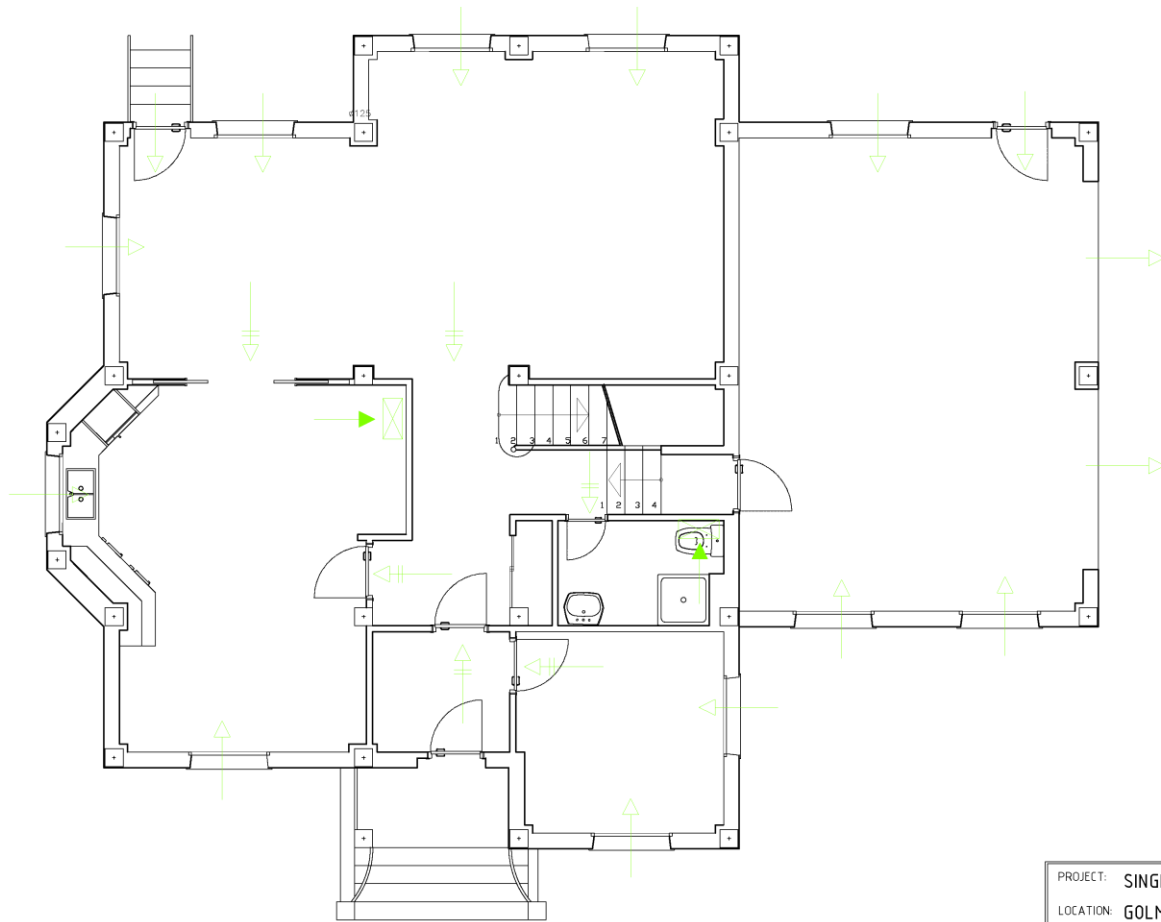
-  Garden
-  Roof
-  Stone

GAS	
 Cold water canalization	 Pressure regulator
 General stopcock	 Gas canalization
 Counter	 Natural gas boiler
 Stopcock	



PROJECT: SINGLE FAMILY HOUSE				
LOCATION: GOLMAYO, SORIA, SPAIN				
AUTHOR: ANDREA PENADÉS ORTOLÁ				
TUTOR: FRANTISEK KULHANEK / MILAGROS IBORRA				
SCALE: 1:200	PLAN NAME: GAS SYSTEM	Nº PLANE: 44	DATE: JUNE 2011	

VENTILACIÓN

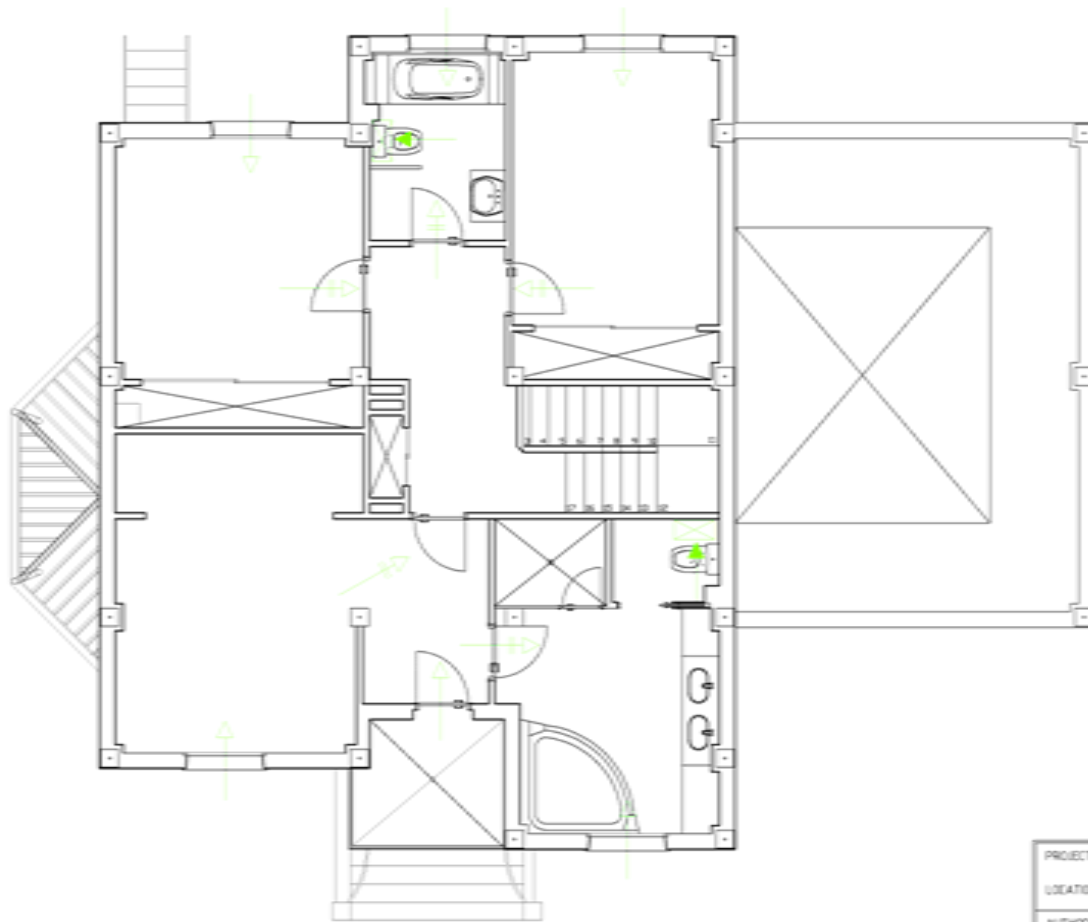


VENTILATION	
	Admission opening
	Cross opening
	Extraction opening
	Extraction pipe

PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	VENTILATION: GROUND FLOOR	48	JUNE 2011



VENTILACIÓN

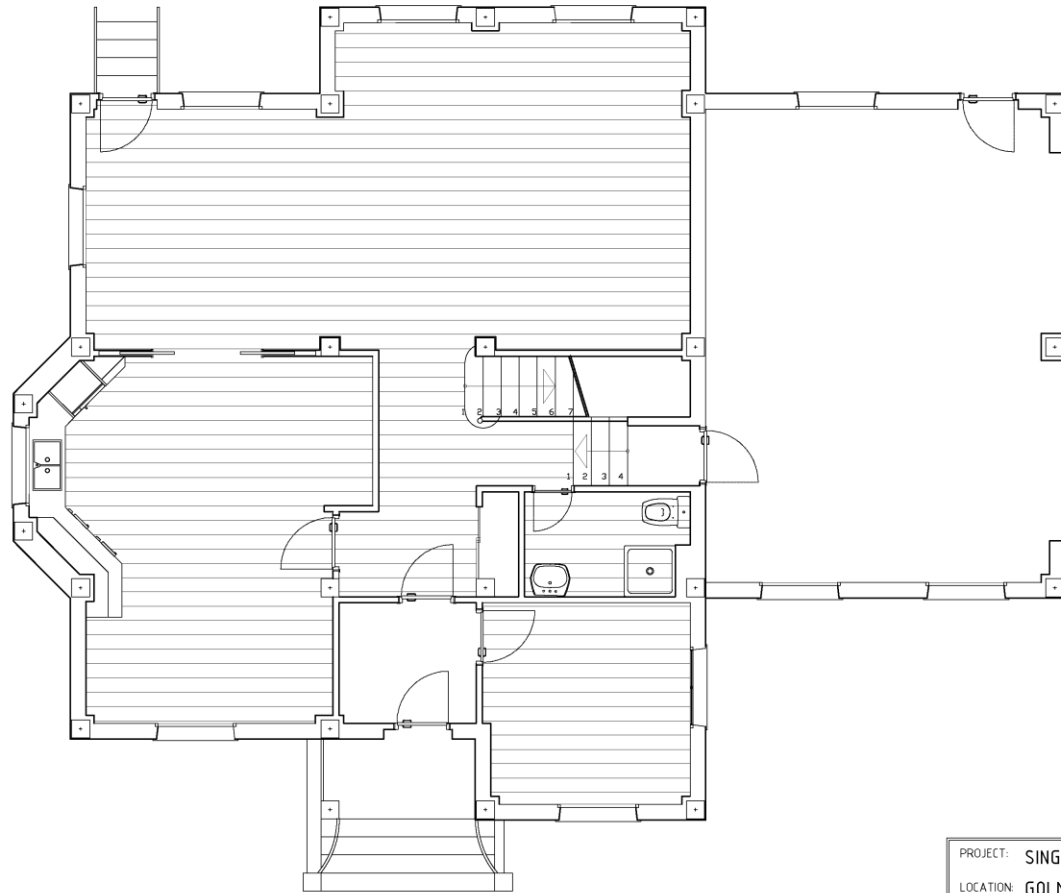


VENTILATION	
	Admission opening
	Cross opening
	Extraction opening
	Extraction pipe

PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	NO. PLANE:	DATE:
1:75	VENTILATION: FIRST FLOOR	49	JUNE 2011



FALSO TECHO



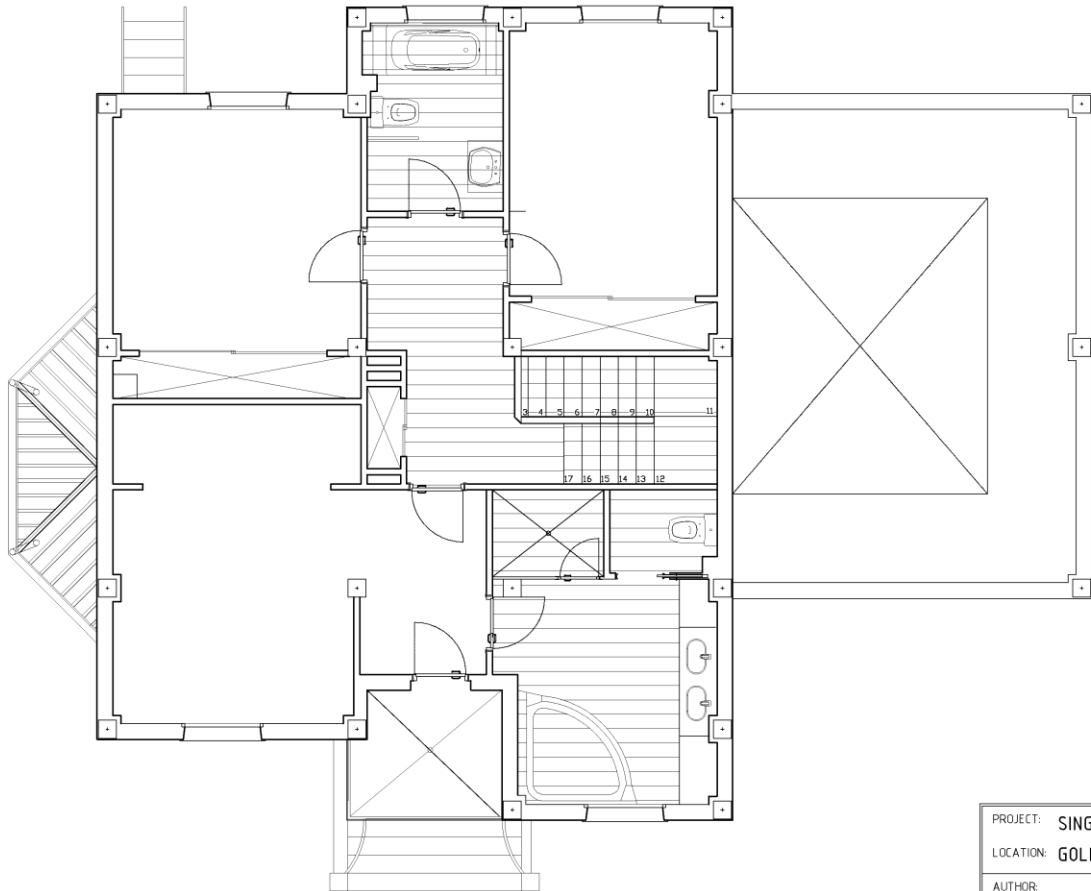
 CONTINUOUS PLASTER
CEILING



PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	CEILING: GROUND FLOOR	50	JUNE 2011




FALSO TECHO



 CONTINUOUS PLASTER
CEILING

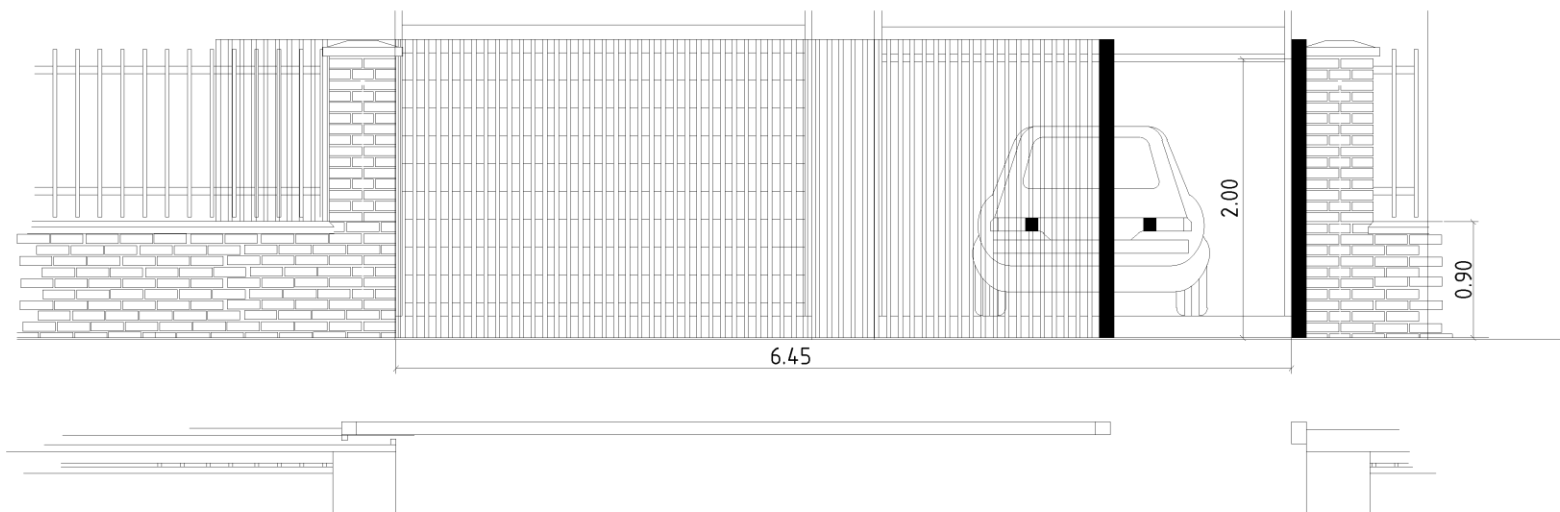


PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	CEILING: FIRST FLOOR	51	JUNE 2011

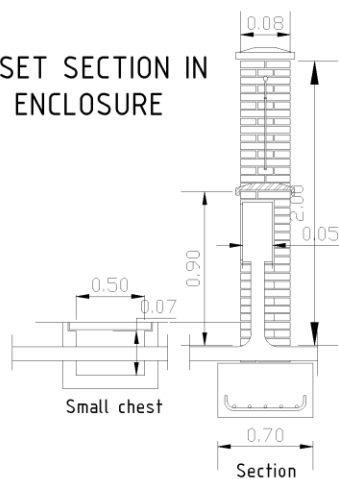


JARDINERÍA

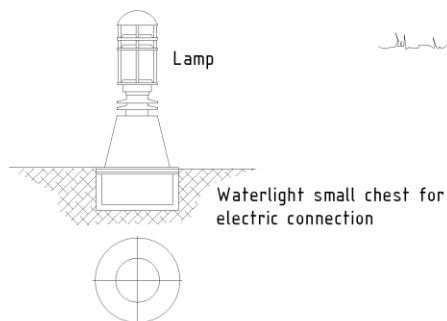
ACCESS DOOR TO THE PLOT



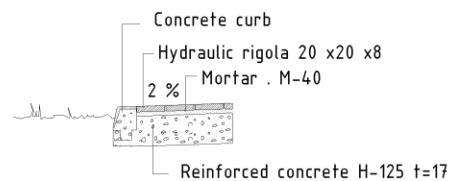
CLOSET SECTION IN THE ENCLOSURE



GARDEN ILLUMINATION



TILING DETAIL

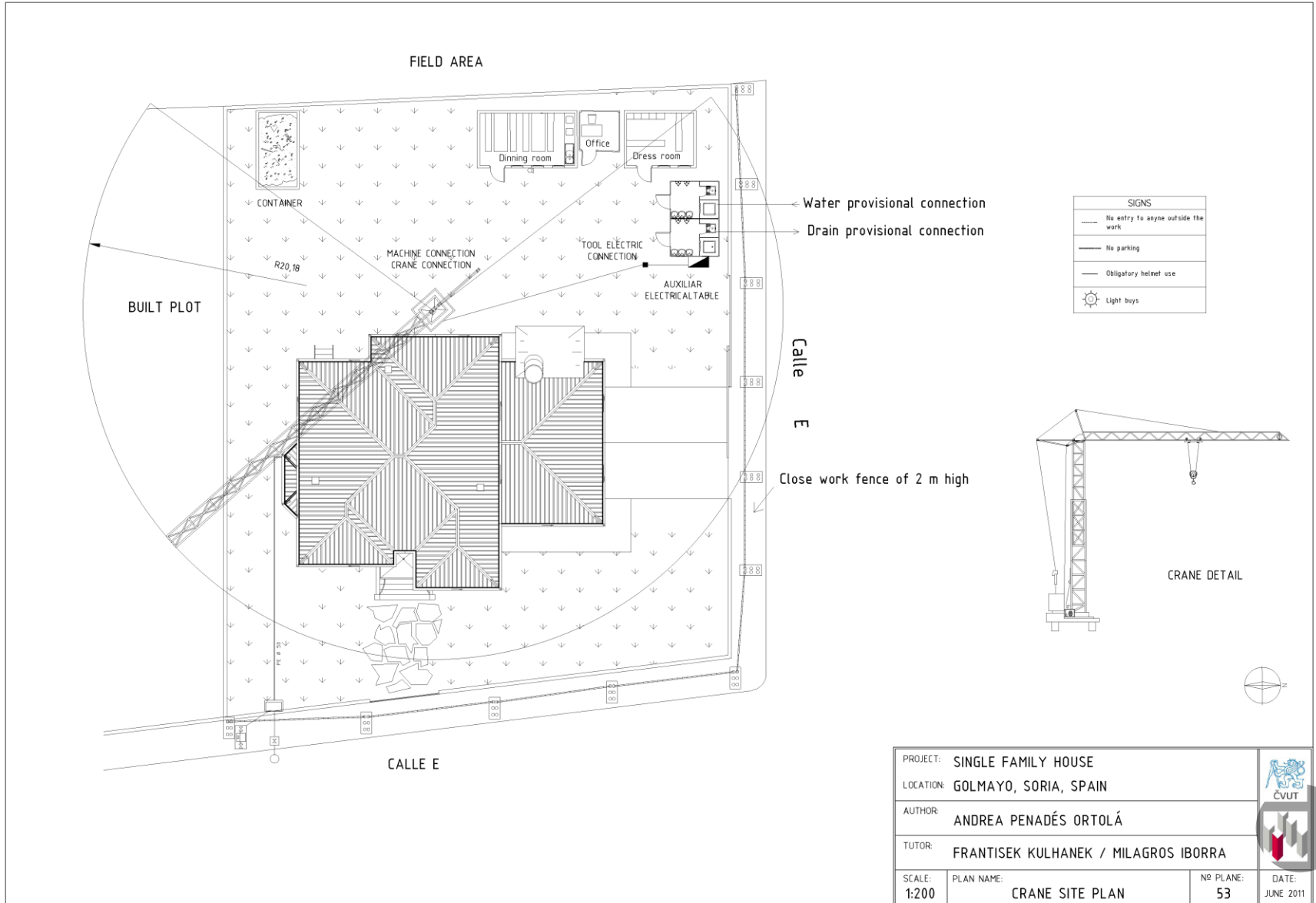


PROJECT:	SINGLE FAMILY HOUSE		 
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	№ PLANE:	DATE:
1:35	SAFETY PLAN	52	JUNE 2011

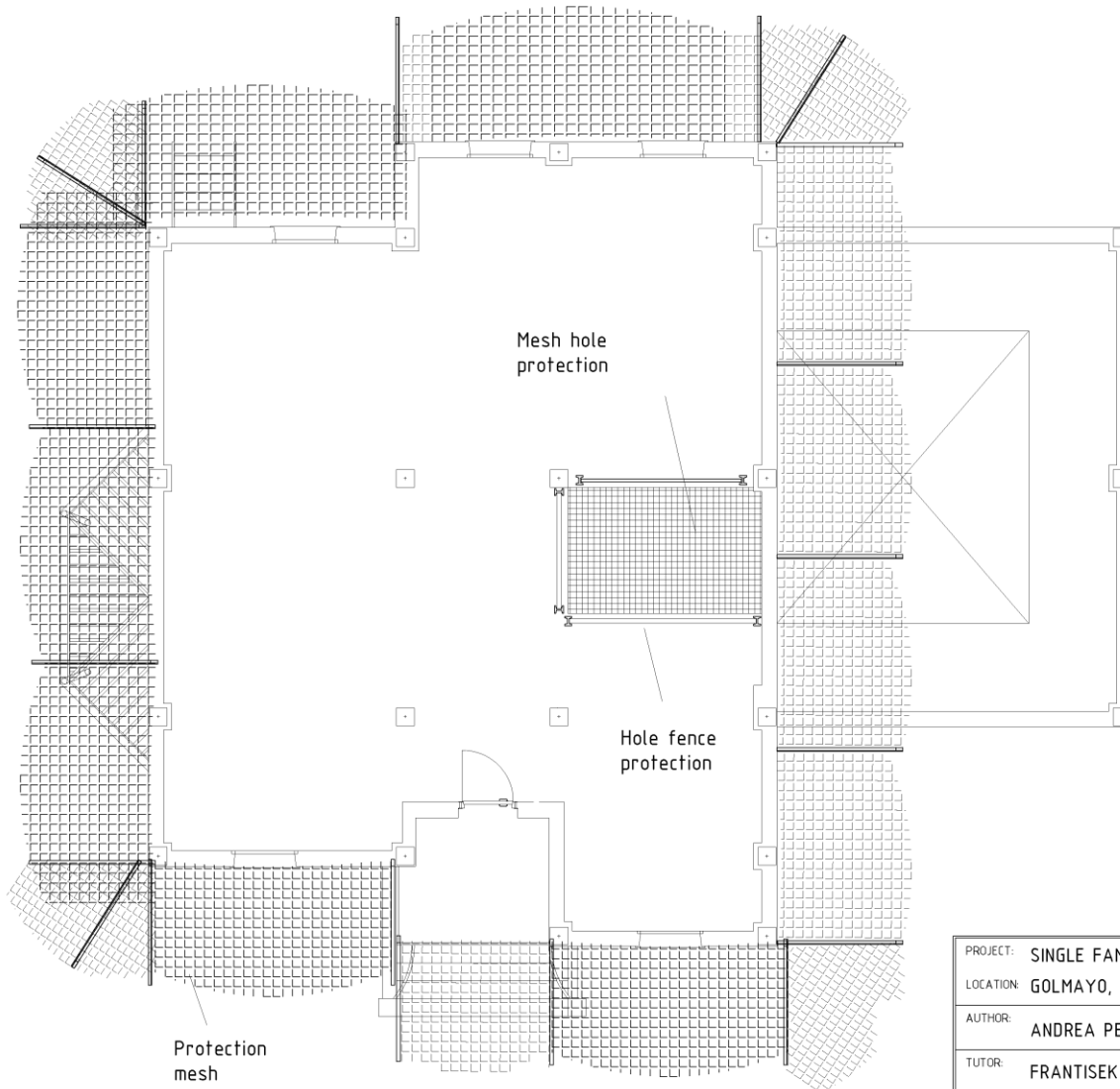


SEGURIDAD Y SALUD

GRÚA



SEGURIDAD



PROJECT:	SINGLE FAMILY HOUSE		
LOCATION:	GOLMAYO, SORIA, SPAIN		
AUTHOR:	ANDREA PENADÉS ORTOLÁ		
TUTOR:	FRANTISEK KULHANEK / MILAGROS IBORRA		
SCALE:	PLAN NAME:	Nº PLANE:	DATE:
1:75	SAFETY PLAN	54	JUNE 2011